Doctoral (PhD) Dissertation

THE SUBSTANTIALIST REASON IN VALUE RESEARCH: A CRITICAL ASSESSMENT OF TWO INGLEHART THESES

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A SZUBSZTANCIALISTA MEGKÖZELÍTÉS AZ ÉRTÉKKUTATÁSBAN: KÉT INGLEHART-TÉZIS KRITIKÁJA

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Introduction

Ronald Inglehart's work marks a new era in the history of the social sciences. He is one among the few scholars who have literally revolutionized cross-cultural research. While a growing body of cross-national data on many a sociologically relevant issue has been available to researchers since the late 19th century, this meant mostly aggregate data. It was several decades after the introduction of representative surveys that researchers have started to have access to cross-cultural data at the *individual* level. Inglehart's interest in the socio-cultural transformation that had started in the West following World War II was an impetus in this evolution. What came to be known as the World Values Survey (WVS) — undertaken at Inglehart's initiative — has evolved into a global enterprise and has surveyed, at regular intervals, more than 100 nations by the beginning of the 21st century. Other programs have followed, but the WVS is still unparalleled in scope and depth, and thus remains the major source in cross-cultural research.

In addition, Inglehart has authored many papers and several monographs that represent the cutting edge of inquiry into socio-cultural change. Thanks to the development of information technology, the data collected within the scope of his research have been made accessible to a wider public. While this has contributed to the engagement with Inglehart's work, it has also elevated his measures to the status of near currencies. As with measures in general, these have both strengths and weaknesses — and what they mismeasure is probably as relevant to the inquiry as what they measure well. Accordingly, the debates on Inglehart's theses typically include a debate on his measures. While a consistent thread in these debates points to issues with Inglehart's theory on socio-economic change, his methods have undergone only slight adjustments. Over time, the Inglehart school has matured into a research tradition with prominent scholars like Christian Welzel expanding on the original theses and producing new, refined indicators to track socio-cultural change. Considering that both the theoretical core and the school's methods have remained constant, concerns with them are similar.

The study presented in this thesis is a critical assessment of two important chapters in Inglehart's work. One is the postmaterialism thesis, which originates in his studies conducted

during the late 1960s. This theory of economic growth-induced value change had later developed into a detraditionalization, and more recently a civic emancipation thesis. The other is an inquiry into the "opposite" causal direction: the cultural origins of economic growth. Although the former thesis is more influential, the latter is no less significant because it stems from an attempt at building a bridge between mainstream economics and the social sciences. The recurring debates on the necessity to "operationalize" culture in macroeconomic models have much to rely on this part of Inglehart's work.

Given this specific focus, this thesis is *not a monograph* on Inglehart's scholarship. Instead, my purpose is to reexamine the two selected theses and conduct an empirical study by relying on the debates around them. The scope of such an inquiry is narrower than it would be in the case of a monograph: in order to drill deeper, this is a requirement. Accordingly, such important chapters of Inglehart's output as his studies on the transformation of political conflicts, the process of democratization or the evolution of gender roles are not addressed in this study.

In Chapter 1, I argue that Inglehart's three most influential instruments measuring cultural values: the Postmaterialism Index, the self-expression-survival, and the secular-traditional measures obfuscate the complexity of the value space. To overcome the limitations of these instruments, I present an alternative method in the form of multiple correspondence analysis (MCA), a geometric approach to data analysis. This separates out those axes of cultural values: religiosity, authoritarianism, and materialism that Inglehart's scales treat as part of broader cultural dimensions. This chapter addresses another important issue: construct equivalence. A long-standing criticism of Inglehart's methods has been related to uncertainty regarding the comparability of his instruments derived from cross-national multivariate analyses. The tests of invariance corroborate these concerns. Regarding the measures proposed as alternatives to Inglehart's instruments, the cross-national comparisons include only countries where the equivalence of constructs could be established. These comparisons show that national values and trajectories of change challenge Inglehart's postmaterialism/detraditionalization thesis on several counts.

Chapter 2 examines the linkages between cultural values and economic growth with reference to the update to the endogenous growth model proposed by Inglehart and his collaborators. Their formulation suggests that cultural values have an independent impact on economic growth via savings and technological innovation. Since this approach maintains the basic neoclassical assumptions it intends to improve on, the discussion focuses on the cultural

variable introduced in the model by reviewing heterodox approaches to economic growth. This chapter also includes regressions specified with reference to Inglehart's growth model and using the value constructs developed in Chapter 1. It should be emphasized that the argument presented in Chapter 2 merely examines Inglehart's augmented endogenous growth model with reference to currents outside mainstream economics, and as such, it does not purport to propose an alternative model of growth.

Chapter 3 revisits the issues with Inglehart's two theses from the perspective of field theory, a relational approach to the study of social phenomena. I argue that much of the concerns with Inglehart's theses stem from the substantialist paradigm. The latter treats theoretical constructs like the economy or culture as objectively delimited counterparts (substances), an assumption that field theory rejects. The argument expands on the symbolic and material aspects of agency by relying on Weber's concept of elective affinity and Bourdieu's studies on symbolic power. While Bourdieu is an obvious reference for a sociological argument applying field analysis, Weber might look somewhat out of place. This is because his Protestant ethic thesis has been canonized as a substantialist theory of economic development — an interpretation that can be refuted on closer scrutiny. By reexamining this thesis, I argue that its actual propositions can be accommodated in field theory and moreover point out the flaws in the substantialist school using it as a reference.

Compared with Chapters 2 and 3, Chapter 1 includes a more "technical" discussion. If one is to address the issues with Inglehart's empirical apparatus, this is inevitable. Nonetheless, because this is not a text on methodology, the statistical formalization is kept at a minimum. The insights from this part resurface in the closing chapter where they are discussed as challenges specific to a field analysis of values.

While the core argument builds up across the three chapters, each chapter is written in an article format, having its own introduction and a section with conclusions. Chapter 3 sums up the implications of the first two chapters by developing into a reflection on the empirical relevance of values and the major difficulties pertaining to their study from the field analytical perspective.

1. Traditional values and the Inglehart constructs

The text included in sections 1.1 to 1.3 of this chapter and the related notes (A1.1 in Appendix 1) is published under the same title in Volume 79, Issue S1 of Public Opinion Quarterly (Lakatos 2015), available online starting with April, 2015. Copyright for this part is held by Oxford University Press. Reproduced here by permission.

1.1. The postmaterialism index and its offshoots

Inglehart's postmaterialism thesis presented in his early writings (Inglehart 1971, 1977, 1981) comprise two complementary hypotheses. The *scarcity thesis*, borrowed from Maslow's needs theory (1970) posits that since people value anything that is in short supply, so long as their physical survival and material security are not taken for granted, they will be driven by materialistic aspirations. Increasing affluence leads to a de-emphasis of not only material gains but also of religion and unquestioned authority in favor of secular, libertarian values, and political emancipation. The *socialization thesis* conceives of value orientations acquired during one's formative years as stable over adulthood.

Of Inglehart's three most influential measures, the Postmaterialism Index is an indicator of this cultural shift. Central to the empirical evidence behind the Postmaterialism Index is a factor analysis of responses to questions on national priorities (Table 1). Critics have argued that since most of these questions address policy preferences rather than values, the relationship posited by Inglehart between the private and the public domain is problematic. Flanagan (1982a, 1982b; Inglehart and Flanagan 1987) has suggested that the Postmaterialism Index is an inadequate measure of two separate dimensions of political conflicts in Western societies: on one hand, the relative importance of economic versus non-economic issues, and, on the other hand, the preference for libertarian versus authoritarian policies. The problematic inference of values from answers to questions on public policy alone is also discussed in Marsh (1975), Lafferty and Knutsen (1985), Trump (1991), Haller (2002), and Majima and Savage (2007). Other concerns have to do with the evolution of the Postmaterialism Index,

which does not follow the trajectory posited by the theory. Growing portions of materialists among the young in a number of European countries (Böltken and Jagodzinski 1985), the absence of significant effect of formative economic experiences on the postmaterialism score in adulthood (Clarke and Dutt 1991; Duch and Taylor 1993, 1994; De Graaf and Evans 1996; Clarke, Dutt, and Rapkin 1997a, 1997b), and high instability, attributed specifically to random distribution of responses and non-attitudes (Van Deth 1983; Davis and Davenport 1999; Davis, Dowley, and Silver 1999) are documented. Inglehart's response to these challenges has been the reaffirmation of his original theses by pointing out differences between his and his critics' methods, arguing that general trends should be tracked at the ecological rather than at the individual level, stressing that the meaning of the left and right has been changing in line with his theses, and that the overall trend in the West has been an increase in the portion of postmaterialists, even after controlling for inflation (Inglehart 1982, 1983, 1985a, 1985b; Inglehart and Flanagan 1987; Abramson and Inglehart 1994; Abramson, Ellis, and Inglehart 1997; Inglehart and Abramson 1999).

Materialist Measures	Postmaterialist Measures
A) Maintaining order in the nation*	B) Giving people more say in decisions on the government*
C) Fighting rising prices*	D) Protecting freedom of speech*
E) Maintaining a high rate of economic growth	G) Giving people more say in how things are decided at work and in their community
F) Making sure the country has strong defense forces	H) Trying to make our cities and countryside more beautiful
I) Maintaining a stable economy	K) Moving towards a friendlier, less impersonal society
J) Fighting against crime	L) Moving towards s society where ideas count more than money

Table 1 Inglehart's 12-item battery of materialist versus postmaterialist measures

Note: Reproduced from Inglehart (1997: 355). The Postmaterialism Index is calculated using a 4- or 12-item battery pertaining to national priorities and policy preferences as perceived by the respondent. The 4-item index is constructed as follows: for the questions on the first and the second most important national priorities, respondents selecting both "maintaining order in the nation" (A) and "fighting rising prices" (C) are classified as materialists, while those selecting both "giving people more say in decisions on the government" (B) and "protecting freedom of speech" (D) are classified as postmaterialists. Those selecting both a "materialist" and a "postmaterialist" item are classified as mixed. This 3-point scale is available for most WVS country surveys, whereas the 12-item index (on a 6-point scale, constructed from questions A to L) is available only for a limited number of countries and waves. *Items used for the 4-item Postmaterialism Index.

An assessment of the postmaterialism thesis should notice that Inglehart's approach to value measurement originates in the mind and mood among a specific sector of Western intelligentsia in the late 1960s. "Postmaterialism" might be relevant for the description of the political upheaval in a number of Western societies related to the decline of class-based political parties (Inglehart and Rabier 1986; Inglehart and Siemieńska 1988; Inglehart 1988). The rise of a New Left emphasizing non-economic concerns, exemplified by the Socialist Party in France (by opposition to the industrial worker-based Communist Party) is a phenomenon characteristic of that era. (The 1968 Paris revolt is an important reference in *The Silent Revolution* (1977).) However, past the late sixties turmoil, class has not lost its relevance to the political conflicts of late capitalism (G. Evans 1993; G. Evans 2000; G. Evans and Whitefield 2006; Szelényi, Fodor, and Hanley 1996; Green and Huey 2005; van Der Waal, Achterberg, and Houtman 2007). Moreover, non-materialist concerns, which, especially in Inglehart's early writings are associated with the New Left have been found relevant to the rise of new rightwing parties in a number of Western societies (Achterberg 2006; Achterberg and Houtman 2006; de Koster, Achterberg, and van der Waal 2012), corroborating Flanagan's hypothesis that an emphasis on non-economic concerns and anti-authoritarianism are unrelated.[1] Finally, the distinction between "economic" versus "cultural" concerns can be questioned on empirical grounds: this aspect is discussed in detail in Chapter 3.

With the expansion of the World Values Survey's geographical coverage, Inglehart has refined his thesis of value change, reinterpreting the postmaterialist shift as part of a broader transformation toward self-expression (Inglehart and Abramson 1994; Abramson and Inglehart 1995). To account for this phenomenon, he constructed two more comprehensive indicators that he claims to account for much of the value change taking place across societies with different cultural traditions (Inglehart 1997; Inglehart and Baker 2000)[2]. The secular-

[1] The questions making up the full battery used to calculate the Postmaterialism Index are relevant to the specific problems of "30 Glorious Years" following the end of World War II when high growth rates, near full employment, and rapidly decreasing social inequalities were the characteristics of most Western economies. Hence the omission of a question on unemployment among the items making up the Postmaterialism Index might have been justified during that period but not starting from the late 1970s, when rising unemployment and stagnating and even declining living standards became reality for an increasing part of Western publics (Clarke et al. (1997a, 1997b).

[2] This study references the analysis presented in Inglehart and Baker (2000) because it is based on a more parsimonious model than Inglehart's 1997 book titled *"Modernization and Postmodernization"*. A 2005 text

traditional and the self-expression-survival scales (Table 2, p. 15) define a two-dimensional value space in which societies form clusters that appear to represent historical-cultural entities in a "Global Cultural Map" (Figure 10, page 47).[3] These scales are prominently used in later studies proposing a reformulation of the postmaterialism thesis within the scope of a more comprehensive theory of individual resources-driven human development, supported by a complex methodological apparatus (Inglehart and Welzel 2003, 2005). While the pool of variables on which these newer instruments are based is different from the items used in the Postmaterialism Index, the weaknesses of the latter apply to them as well. First, while Inglehart argues that secularism versus tradition and self-expression are relevant at the individual level, the two scales were derived from correlations at the ecological and pancultural levels without verifying their validity within the countries whose scores are compared.[4] Second, both constructs are too heterogeneous to be considered value orientations (Datler, Jagodzinski, and Schmidt 2013). The secular-traditional dimension combines items tapping religiosity with indicators of authoritarianism and achievement values, as if these formed one underlying dimension. Of the variables from which the self-expression-survival dimension was originally extracted, two ("happiness" and "trust in people") are not values,[5] while a third item associated with this dimension ("priority to economic and physical security over self-expression and quality of life") is the Postmaterialism Index, whose construction is problematic for the reasons reviewed.

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revisiting the issue, co-written with Welzel as a chapter of their *"The Human Development Sequence"* (2005) does not depart from the argument presented in the 2000 study.

[3] This map is included in the fourth section where the analysis will focus on country locations in the space of values.

[4] The initial configuration using 43 items was found at the ecological level (Inglehart 1997: 82). A later version stemming from a reduced 10-item battery (Inglehart and Baker 2000) extends the analysis to the individual level, but ignoring the country of origin. A similar configuration found at these two levels is no evidence of universally valid dimensions of culture at the *individual* level — see the discussion of this point in the second part of this chapter.

[5] In Inglehart's earlier study (1997), these dimensions were labeled "secular/rational versus traditional" and "well-being versus survival" values respectively. The above labels refer to the later formulation (Inglehart and Baker 2000).

Secular-traditional-Rational Values[a]	Self-expression-survival Values[c]
TRADITIONAL VALUES EMPHASIZE THE FOLLOWING:	SURVIVAL VALUES EMPHASIZE THE FOLLOWING:
God is very important in respondent's life	Respondent gives priority to economic and physical security over self-expression and quality-of-life[d]
It is more important for a child to learn obedience and religious faith than independence and determination[b]	Respondent describes self as not very happy
Abortion is never justifiable	Respondent has not signed and would not sign a petition
Respondent has strong sense of national pride	Homosexuality is never justifiable
Respondent favors more respect for authority	You have to be very careful about trusting people
(SECULAR-RATIONAL VALUES EMPHASIZE THE OPPOSITE)	(SELF-EXPRESSION VALUES EMPHASIZE THE OPPOSITE)

Table 2 Inglehart and Baker's secular-traditional and self-expression-survival scales

Note: 10-Item nattery, reproduced from Inglehart and Baker (2000: 24) without the factor loadings presented in the original table. Nation-level and individual-level data from 65 societies surveyed in the 1990-91 and 1995-98 World Values Surveys. Compared with the study presented in Inglehart 1997, this is a reduced battery.

[a] Explains 44 percent of cross-national variation and 26 percent of individual variation

[b] Autonomy index

[c] Explains 26 percent of cross-national variation and 13 percent of individual variation

[d] Measured by the four-item materialist/postmaterialist values index.

In an effort to overcome the limitations of these measures, recognized also within the Inglehart school, Christian Welzel has proposed two new indicators (Welzel 2013). Nevertheless, the improvement has been a refinement of, rather than a departure from the earlier apparatus. This is already apparent at the stage of scale construction: Welzel abandons the dimensional logic in favor of compository logic, in which various indicators are combined not because they form empirically coherent clusters but because they "complement each other" (2013: 58) conceptually. The non-values and the items measuring (post)materialism are no longer part of the sets, but the new *secular* and *emancipative values* scales are, if anything, more comprehensive than Inglehart's instruments. The former brings together items related to religiosity, respect of authority, relativism, and skepticism. The latter is more coherent, combining tolerance, gender equality, political participation, and personal autonomy (2013: 64-70).

Because multivariate analysis is not used in the construction of the scales but presented descriptively, Welzel's secular and emancipative values measures are correlated. Welzel emphasizes this property as part of the rationale, arguing that in dimensional logic, items with lower loadings are downgraded (their unique variance parts being treated as measurement error), and that standardized scores resulting from separate multivariate analyses, (e.g., different country samples) ignore absolute therefore "real and meaningful" individual positions. Most importantly, his theoretical argument, the human empowerment theory (HET) proposes that "by dissociating people from sacred authority, secular values are a likely precursor of the internalization of authority that comes with emancipative values" (2013: 62). In the following, I argue that this is an oversimplification, and the conflation of religiosity with authoritarianism leads to a misplaced perspective on cultural shifts.

1.2. Exploring the space of values with multiple correspondence analysis

A sensible alternative to Inglehart's instruments has to build on items that tap actual values, avoid ambiguity in the resulting constructs, and focus on the individual level. In addition, it should restrict cross-cultural comparisons to cases achieving at least construct equivalence. To address these requirements, this study uses multiple correspondence analysis (MCA). Before turning to the discussion of the results obtained with this technique, I review the considerations in favor of MCA with reference to Benzécri (1992), Le Roux and Rouanet (2006, 2010), and Blasius and Greenacre (2006).

Correspondence analysis, a method to analyze two-way contingency tables and multiple correspondence analysis, its variant extended to a subjects versus categories table are subclasses of geometric data analysis (GDA). In very broad terms, MCA is said to be "suitable" for studying categorical data, as opposed to principal component analysis (PCA) and related methods, appropriate for continuous variables. However, this description barely scratches the surface. In conventional multivariate methods such as PCA and factor analysis, the focus of the study is the *variables*: On one hand, the input variables, on the other hand, the constructs that the procedure seeks to establish as giving the best description of those items. In the case of PCA, this is done by computing linear combinations, whereas factor analysis searches for underlying dimensions using regressions.

In contrast, the focus in multiple correspondence analysis is the space of *subjects* (individuals in our case). This means that unlike the above methods, MCA and other variants

of GDA do not "search" for *meta*-variables that best capture the information contained in the input variables. While a space of latent variables is also constructed in GDA, this is done by *calculating relative distances in a Euclidean space between subjects based solely on their properties* (the categories of the input variables).[6] The common method to describe these relationships is the chi-square statistics.

In GDA, the latent structure emerges *from the data*, rather than being "imposed" on them. Unlike multivariate analysis using probabilistic modeling, MCA is a technique where "(t)he model should follow the data and not the inverse" (Blasius and Greenacre 2006: 6). The underlying research philosophy stems from a theoretical framework which "identifies reality not with *substances* but with *relations*" (Bourdieu 1987: 150, emphasis added) — a perspective that will be explored in Chapter 3. As applications of MCA demonstrate, the model can be also used in an explanatory framework. The most common method is the superposition of *supplementary variables* on the cloud of individuals, that is, variables which do not participate in the construction of the structure but help the interpretation.

Apparent similarities (notably in visual displays) between PCA/factor analysis and GDA disguise this fundamental difference in their respective approaches. For example, while it is technically possible to visualize a cloud of individuals from the scores produced by PCA/factor analysis, it will not be the same "kind" of space as that constructed in MCA. Whereas in the in the former, subject vectors are computed with reference to linear combinations/explanatory variables, individual coordinates reflect no such "fitted" variables in MCA.[7] Given the different roles assigned to subjects and variables, adaptations of factor analysis to ordinal variables (Jöreskog and Moustaki 2001) and variants of GDA do not take the same approach. Likewise, principal component analysis *recast* as geometric data analysis is a method related to multiple correspondence analysis, not "conventional" PCA: it investigates not only associations between continuous variables but also proximities between subjects (Le Roux and Rouanet 2006: 129).[8]

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[6] In GDA terminology, these are called the cloud of subjects and the cloud of categories (see Figure 5, p. 31).

[7] "Geometric figures, when disconnected from their structural rationale, are little more than pictorial illustrations […]. Blurred structures hinder understanding of procedures." (Le Roux and Rouanet 2006: 9)

[8] Multidimensional Scaling (MDS), while also operating on the basis of proximities differs from correspondence analysis in that the status of the associations (similarity or dissimilarity) must be specified by the researcher. This is not necessary in CA where (dis)similarity emerges from the data (Le Roux and Rouanet 2006: 63).

Having established these differences, it becomes clear that thinking of these methods solely in terms of (input) variable properties is the wrong perspective. Scale properties are not decisive regarding the adoption of GDA — even categorization of continuous variables is not a requirement. Nonetheless, it is often preferable, especially in sociological studies: this reflects the observation ascribed to Benzécri that the oft-cited opposition between "quantitative" and "qualitative" variables is artefactual. A variable is relevant or irrelevant based on its *meaning*, and the investigation of the latter inevitably leads to identifying cut-points, hence categories.

Although its empirical potential has been amply demonstrated thanks notably to Bourdieu's work on taste and cultural stratification (1979),[9] correspondence analysis is still rarely applied in sociological studies. Recent examples include a number of studies on taste and lifestyles (Le Roux et al. 2008; Silva and Wright 2009; Silva and Le Roux 2011; Bennett, Bustamante, and Frow 2013; Hanquinet, Roose, and Savage 2013; Purhonen and Wright 2013), fields of power (Hjellbrekke et al. 2007; Denord et al. 2011; Flemmen 2012; Buhlmann, David, and Mach 2013; Kropp 2013),[10] class and social inequalities (Veenstra 2007), and political attitudes (Harrits et al. 2010). It is probably field analysis that makes the most of the empirical potential of correspondence analysis (Savage and Silva 2013) — an aspect that will be explored in Chapter 3. Most relevant to our subject is a study on the British value system by Majima and Savage (2007) which, in addition to applying MCA because it provides a better representation of the complexity of the "space of values", is also a critical engagement with Inglehart's work. In many respects, the application presented in this chapter extends on their analysis.

1.2.1. Making sense of the MCA output

Before interpreting the value configuration identified in this study, two general considerations are in order. First, the argument in favor of correspondence analysis does not imply that the problems with Inglehart's measures boil down to his reliance on factor analysis. MCA is preferred over other techniques for the underlying research philosophy. Nonetheless, in order to show that the cultural dimensions derived from correspondence

[9] In addition to *Distinction*, other famous applications by Bourdieu include (Bourdieu and De Saint Martin 1978; De Saint Martin and Bourdieu 1987; Bourdieu 1999, 2000a).

[10] Bourdieu's concept of social space with implications for CA is discussed in Wacquant (2013).

analysis are not artefacts generated by methods alone, this section includes, in addition to the output from MCA, results from principal component and factor analyses. These comparisons demonstrate that the dimensions unraveled by MCA are more consistent than those produced by the latter methods.

Second, given the emphasis on the individual level, it is crucial that these procedures identify *universal* dimensions of culture arising from *individual* differences that are not subject to the effect of country bias. Many cross-cultural studies rely on one or a combination of three approaches described in Leung and Bond (1989): (1) a "pancultural" analysis based on correlations of the observed variables at the individual level but ignoring the country of origin; (2) a "cross-cultural" or ecological (Robinson 1950) analysis using correlations of country means; and (3) an "intracultural" analysis performed at the individual level in each of the countries studied. Shweder (1973) found that the dimensions discovered at the cross-cultural level are not necessarily observable in any of the intracultural analyses, and vice versa: a dimension found in all countries may go undetected at the cross-cultural level. Since differences between the configurations obtained at the pancultural and the cross-cultural levels are exceptional (Ostroff 1993), the analyses cannot produce universally valid dimensions of culture — that is, scales whose composition is not subject to bias arising from the national context. For such dimensions to emerge, Leung and Bond (ibid.) propose a fourth type, termed "individual analysis". This includes within-subject and within-culture standardization procedures to eliminate patterning effects (stemming from different correlations within countries) and positioning effects (impacting the relative location of the responses in a specific national context) from the individual responses.[11]

The analysis presented in this section applies Leung and Bond's standardization procedure in the case of principal component and factor analyses. In MCA, structural effects are eliminated using the method proposed by Bry, Robette, and Roueff (2014), a standardization procedure adapted to categorical variables.[12] I use data from the fourth wave of the WVS, collected between 1999 and 2004 in 60 countries, a total sample of 82,244 (World Values Survey Association 2009).[13] The 24 questions selected and combined into the

[11] In this terminology, "individual analysis" is not to be confused with *any* analysis that is carried out at the individual level, e.g. the pancultural and the intracultural analyses.

[12] See Note *A1.1.1. Standardization in MCA* in Appendix 1, p. 138 for details.

[13] For the individual analysis, individual weights were recalculated in order to equalize the size of country samples (N=1.000). The number of allowed missing values was four, and countries with 100% of missing data at any variable were excluded. The countries included in this analysis are listed in Table 14 (p. 143) in Appendix 2.

15 items used in the study reflect a compromise between the requirements stemming from the criticisms reviewed above (that is, the questions should tap values, not mental states or specific policy preferences), and the pool of available items. The original scales were mostly preserved (but transposed to a 0 to 1 normalized scale, prior to standardization) for PCA and factor analysis, and recoded into binary modalities for MCA (see Table 15 in Appendix 2, p. 145 for recoding rules).[14] All three analyses apply orthogonal rotation.[15]

Figure 1 shows the configuration emerging from a multiple correspondence analysis of our 15 variables after elimination of country effects. One of the main concerns with Inglehart's secular-traditional and self-expression-survival measures is that they conflate authoritarianism with religiosity and materialism. In the space defined by the three axes in Figure 1 (p. 21), these orientations form unambiguously separate dimensions. The ten modalities related to various religious attitudes and practices constitute the clearest opposition among the items in the battery (first axis in Plane 1 and 2), and thus account for the highest portion of the variance. The second axis (vertical in Plane 1 and 2, and horizontal in Plane 2 and 3) translates an opposition regarding attitudes toward outgroups, gender roles, and political engagement in the form of an authoritarian-libertarian cleavage (top versus bottom). It is remarkable that even those attitudes to gender roles that are conceptually close to "traditional" forms of religiosity (rejection of divorce and hostility toward childless women) have a stronger relationship with authoritarianism. A third dimension (the vertical axis in Plane 2 and 3) can be best described as a materialism scale. With the exception of a very weak association with preference for giving people more say and freedom of speech, the libertarian-authoritarian attitudes that Inglehart's value change thesis assumes to be related to postmaterialism are not constitutive of this axis.

[14] See preceding remark on categorization. In value research, examples of dichotomization in factor analysis include Moors (2003) and Welzel (2013). For example, Welzel dichotomizes three of the original 12 variables used to construct his secular values scale.

[15] See Note *A1.1.2. Rotation in MCA* in Appendix 1, p. 138 for details.

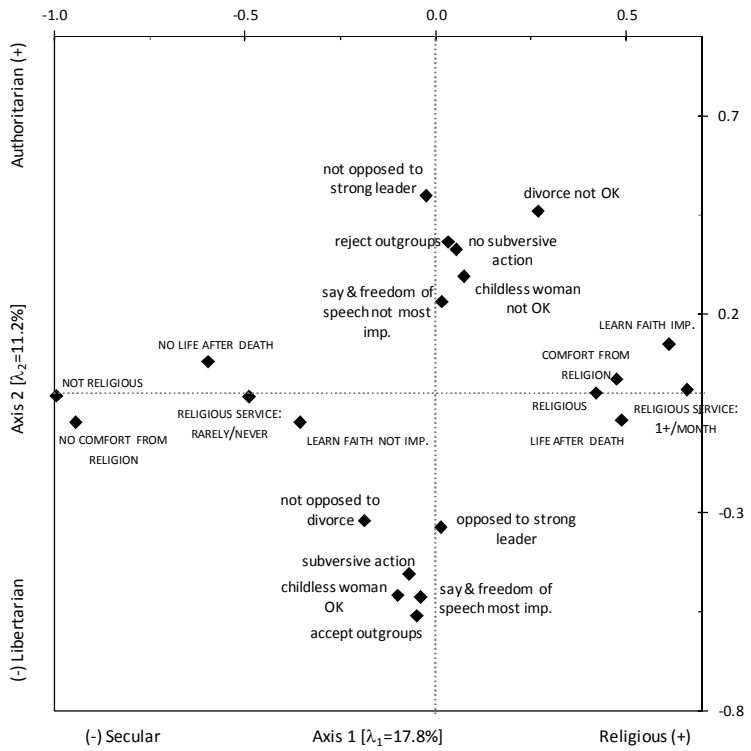

Figure 1 Cloud of modalities from MCA solution at the individual level

Note: Plane 1-2: upper map and 2-3: lower map. Multiple correspondence analysis with orthogonal rotation of 15 variables from the fourth wave of the World Values Survey (1999-2004, 59 countries). Recoding rules are shown in Table 15 in Appendix 2. Individual analysis using the standardization methods eliminating country bias described in Bry, Robette, and Roueff (2014). Only modalities significantly impacting the axes based on test values are shown for each axis. These are in SMALL CAPITALS for Axis 1 and 3, lower case for Axis 2, and *italics* for more than one axis.

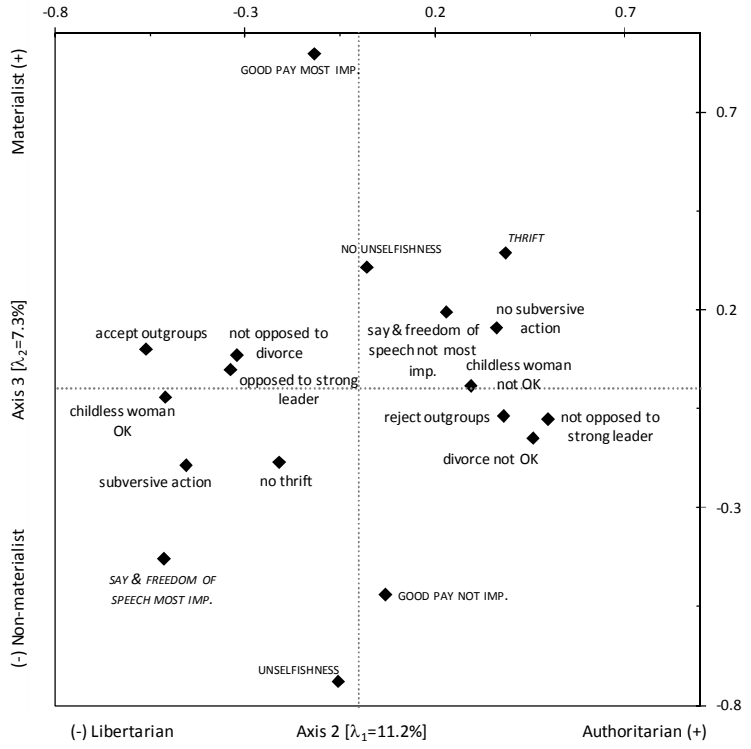

Table 3 (p. 24) shows the loadings for the variables used in the MCA solution together with their loadings obtained in principal component and factor analyses (where the original scales were preserved for the most part). The major insight from this comparison is that while the religious-secular and the authoritarian-libertarian cleavages are detectable across the three solutions, it is the MCA solution that best captures the dimensions behind the original items. In factor analysis, in addition to less consistent factors, the materialism dimension identified in MCA is absent, and eigenvalues are considerably lower. The constructs resulting from principal component analysis are substantially closer to the MCA solution, albeit still less consistent.

A good illustration of construct consistency across the three solutions is the different loadings of "acceptance of divorce". Originally measured on a 10-point scale, this item is associated with the authoritarian-libertarian dimension in the MCA solution, the religious-secular dimension in PCA, and a third, "junk" dimension in factor analysis. Another case in point is the content of the third principal component, a dimension with some resemblance to the materialism axis identified in MCA. But this is an oversimplification: the pattern emerging from PCA is a politically charged variant of materialism, as shown especially by the sizeable negative loading of the item "say & freedom of speech", the second highest after "good pay most important", and also by the still significant negative loading of "subversive action". In contrast, the materialism dimension observed in MCA is more consistent as its correlations with political attitudes are none to very weak.

The comparison with factor analysis is instructive: what remains undetected searching for latent variables that explain the items using regressions is unraveled calculating the relative distances of individuals within the space of 15 semantically opposed modalities in multiple correspondence analysis. A comparison between results from MCA and factor analysis in Majima and Savage's study of the British value system (2007) leads to a similar conclusion. In their analysis, "Inglehart's 'traditional' values […] and 'survival' values […] do not separate out", and especially "the position of the 'materialist values' is out of place" (ibid.: 308), that is, not where they are expected based on the postmaterialism thesis.

The separation of the dimensions identified in correspondence analysis is crucial: complex scales should be anchored in a minimalist definition. With regard to religiosity, such a definition is a key concept in the classical sociological tradition: religion is the classification of things (including also actions, thoughts, space and time) into categories of sacred and profane (Durkheim 2001). Likewise, authoritarianism in its most general form is uncritical

reliance on/acceptance of coercion regardless of source, medium, beliefs or actual practices (Adorno et al. 1964). Concerning actual materialism, it is really "only" about the importance of material gain — and unlike in Inglehart's typology where materialism involves a complex set of attitudes, its opposite value is not *post-* but *non*-materialism.[16] This is not to propose that the more the definition recycles this or that concept in the sociological tradition, the more relevant the empirical apparatus.[17] The key point is that the sociological tradition provides the adequate theoretical framework for the study of values that is not found in the Maslowian assumptions which, extrapolated to the study of values have informed Inglehart's early studies, and continue to influence his research school, including recent work by Welzel (2013).[18]

[16] Viewing political conflict through the prism of postmaterialism has at times led to serious misunderstanding. This is most striking with regard to the rise of Flemish nationalism which Inglehart explains by "an important latent function (…) to satisfy the need for belongingness" (1971: 1011). As evident from the context of the argument, Inglehart here refers to a non-materialist "kind" of belongingness, i.e., a postindustrial and postnationalistic drive to find meaning beyond parochial patterns of thought. This however is a remarkable exaggeration overlooking Flemings' decades-long struggle for more autonomy within the framework of a unitary Belgian state traditionally dominated by the French-speaking sectors. Identifying Flemish nationalistic tendencies as a shift from economic issues to "cultural and humanitarian gains" (ibid.: 1012) ignores precisely those issues that lay at the heart of Flemings' resentment going back to French-speaking dominance in an era where economic growth was driven by the heavy industry and mining concentrated in the Southern part of the country. The deepening of these conflicts is inseparable from the switching of Belgium's economic center of gravity to Flanders, with growing resentment of what Flemish elites began to portray as their region's financial contribution to an economically underperforming Wallonia. Therefore, Belgium's transformation into a federal state as a result of a long series of constitutional reforms has been the outcome of not simply a shift to "lifestyle" issues but of a hard-fought economic and legal struggle in the most "materialist" sense.

[17] For example, it has been argued that Weber's definition of the six value spheres is incoherent and runs into contradictions (Oakes 2001, 2003). The issue is addressed in Chapter 3.

[18] In social psychology, the importance of distinguishing between authoritarianism, conservatism, and religiosity is recognized, notwithstanding the fact that these dimensions form a broader domain which, from a Freudian perspective, "seem to reflect external projections of the superego" (Saucier 2000: 379). Concerning political attitudes, Ashton et al. (2005) found that a two-factor solution comprising a compassion versus competition (a construct related to religiosity), and a moral regulation versus individual freedom scale gives a more accurate description of political conflict than does a single left versus right dimension.

	MCA			PCA			Factor Analysis		
	1	2	3	1	2	3	1	2	3
comfort and strength from religion (get ~)	**.67**	.05	.02	**.73**	-.06	.11	**.68**	-.04	.13
religious	**.64**	.00	.07	**.68**	-.06	.11	**.60**	-.02	.10
religious service (frequency)	**.57**	.01	.02	**.67**	.05	-.03	**.54**	.01	.05
life after death (believe in ~)	**.54**	-.07	-.05	**.50**	-.27	.16	**.38**	-.09	-.05
learn faith important	**.47**	.10	.00	**.49**	.14	-.05	**.35**	.08	.03
reject outgroups	.04	**.46**	-.08	.02	**.67**	-.20	.01	**.30**	.01
strong leader	-.02	**.41**	-.06	-.06	**.43**	.11	-.03	**.25**	-.01
subversive action	-.06	**-.41**	-.17	-.26	-.27	**-.35**	-.22	**-.25**	-.16
acceptance of divorce	-.22	**-.38**	.10	**-.50**	-.40	.12	-.51	-.45	**.73**
childless woman (acceptance of)	-.08	**-.39**	-.01	-.06	**-.42**	.07	-.06	**-.24**	-.02
say & freedom of speech (importance of ~)	-.03	**-.34**	-.29	-.14	-.21	**-.57**	-.15	**-.26**	-.17
thrift	-.04	**.28**	.25	-.08	**.41**	.19	-.03	**.25**	.04
good pay (importance of ~)	.00	-.09	**.66**	-.16	.05	**.59**	-.06	**.17**	.03
unselfishness (important)	-.03	-.03	**-.48**	-.04	.05	**-.44**	-.07	-.06	**-.10**
less emphasis on money (good thing)	.05	-.15	**-.29**	-.05	**-.16**	-.14	-.06	-.09	**-.12**
Eigenvalue	2.72	1.70	1.11	2.31	1.38	1.17	1.72	.66	.66
% explained	17.8%	11.2%	7.3%	15.4%	9.2%	7.8%	11.5%	4.4%	4.4%

Table 3 Loadings for universal dimensions of values at the individual level

Note: Observed in multiple correspondence (MCA), principal component (PCA), and factor analyses of 15 items. Data are from the World Values Survey, wave 4 (1999-2004, 59 countries). Country bias eliminated using the standardization methods described in Leung and Bond (1989) for PCA and factor analysis, and in Bry, Robette, and Roueff (2014) for MCA. All three analyses perform orthogonal rotation of the axes. Extraction uses the maximum likelihood method in factor analysis. Highest absolute values are in bold. The items are binary modalities for all variables in MCA, and mostly original scales in PCA and factor analysis. The Recoding rules are shown in Table 15 in Appendix 2. In the case of MCA where the input variables are categorical, the loadings are the correlation ratios (η^2), calculated by dividing the between-variance of the partition (the variance of category mean points) by the total variance (the weighted average variance of the subclouds (within variance + between variance).

One could object that Inglehart's typology is based on a minimalist configuration and other dimensions would emerge, were we to carry *his* analysis beyond just two dimensions. Indeed, Inglehart readily admits that we would get a "somewhat different solution" if further dimensions were retained in his factor analyses. Still, he dismisses that suggestion as misleading by arguing that "(d)oing so produces a far more complicated result that might superficially seem more scholarly", whereas "cross-cultural variation (…) can be interpreted with a relatively parsimonious model" (Inglehart 1997: 91). We can reasonably assume that had the psychographic variables, the Postmaterialism Index and the non-values been omitted from Inglehart's analysis, a different configuration would have emerged from even a two-

dimension solution.[19] The clustering of the 15x2 semantically opposed modalities into three distinct dimensions at the individual level is an indication of substantive differences in their content, rather than an artefact of scholarly sophistication.

1.3. Configural variance

Inglehart's factor analyses were performed at the pancultural and the cross-cultural levels (Inglehart and Baker 2000). The instability problems reviewed with regard to the Postmaterialism Index are in part related to equivalence issues: the same construct detected at the pancultural and/or cross-cultural levels may or may not be found at the intracultural level. It is then remarkable that equivalence issues rarely come up in the debates on Inglehart's measures (Haller 2002), although there is more awareness of these concerns in psychology than there is in sociology (Moors and Wennekers 2003).

This section assesses the configural invariance of the authoritarianism and religiosity constructs. The method applied is an adaptation of the procedure described in van de Vijver and Poortinga (2002) to MCA.[20] This compares the loadings obtained from country subsamples and configurations at the cross-cultural level. Following target rotation of the loadings — to make sure that the constructs are comparable even if the loadings are inverted or the dimensions succeed in a different order — configural variance is evaluated with reference to a congruence coefficient called Tucker's phi. This score ranges from 0 to 1, and a good agreement between two factors is indicated by a value higher than 0.9.[21] The model includes 74 countries from the first four waves (1981 to 2004), and each country survey (wave) is evaluated separately.[22]

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[19] Discussing the configuration of the modalities in a 3-axis solution of their MCA of 21 variables from the WVS, Majima and Savage note that "rather than (…) endorsing the centrality of the materialist-post-materialist (or a 'survival-self-expressive') dimension, it [the authors' MCA solution] suggests ruptures between libertarian and authoritarian views" (2007: 305).

[20] The authors tested the equivalence of Inglehart's postmaterialism instrument in 39 regions and found that in order to be configurally invariant, some response categories have to be eliminated, and that the construct becomes more salient in affluent countries.

[21] See Note *A1.2.1. Tucker's phi coefficient* in Appendix 1, p. 139 for the mathematical formula.

[22] Like in the analysis producing the 3-axis model, the individual weights were recalculated in order to equalize the size of the country samples (N=1.000) regardless of the number of surveys per country. The number of allowed missing values was two, and countries with 100% of missing values for any variable were excluded.

In contrast with the model discussed in the previous section, patterns attributable to structural effects are a focus in multilevel analysis. Therefore, to obtain the configuration whose invariance will be tested, country effects should *not* be eliminated. Also, the higher the number of constructs and constitutive items, the more likely that specific (and less congruent) country configurations will emerge. For this reason, I use a reduced set from the previous model, dropping the items that tap the third dimension (materialism) and retaining the eight items that best capture the religious-secular and the authoritarian-libertarian dimensions.

The cloud of categories in the reduced two-axis model is shown in Figure 2 (p. 27). The loadings from the cross-cultural solution[23] are presented in Table 4 with loadings from three countries that are informative of configural variations. Table 16 (p. 146) in Appendix 2 shows the classification of country surveys into three categories according to the congruence coefficients of their religious-secular and authoritarian-libertarian constructs. A Tucker's phi of 0.95 and higher for both constructs is chosen as an indicator of good agreement.[24] Of the 162 country surveys, only 76 (47%) achieve this level of invariance for both constructs. One (usually religiosity) is invariant in 75 (46%), and none in 11 (7%) surveys.

Table 4 offers a glimpse into how and why specific country constructs may differ from the general pattern. In the 1990 Japanese and the 1990 Dutch surveys, both constructs are in good agreement with the religiosity and authoritarianism constructs from the cross-cultural solution. In the 2002 Algerian survey, the first dimension appears to capture religiosity, but of a specific type: while the items "religious service" and "(identifies as a) religious person" have high loadings, "(belief in) life after death" and "comfort from religion" cluster together with the items forming the authoritarianism dimension in the cross-cultural solution. With regard to the first dimension, the secondary items (with loadings around .30) include participation in subversive political action, the rejection of outgroups, and a preference for say in government and freedom of speech.

[23] In multiple correspondence analysis, where the input variables are categorical, the input data at the cross-cultural level is the global Burt table with equal weights for countries.

[24] Van de Vijver and Poortinga have argued that Tucker's phis "substantially higher than .90 can still be obtained when one or two items show markedly different loadings on factors with high eigenvalues" (2002: 146). The loadings from the 2002 Algerian survey (Table 4) are a perfect demonstration.

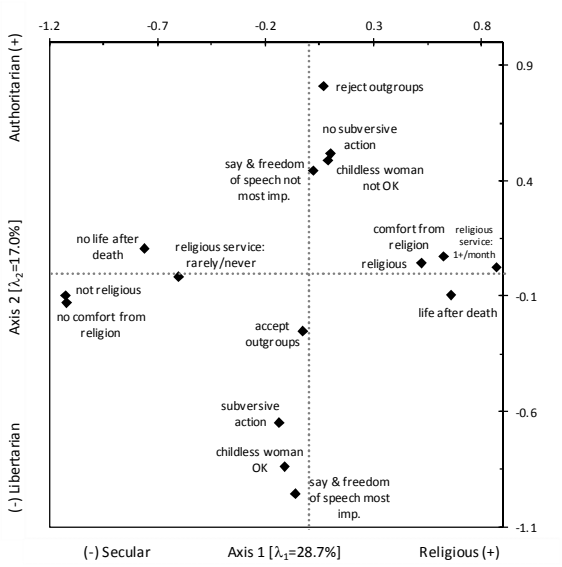

Figure 2 Cloud of modalities from rotated MCA solution for the reduced battery at the individual level

Note: Plane 1-2, multiple correspondence analysis with orthogonal rotation of 8 variables from waves 1 to 4 of the World Values Survey (1981-2004, 74 countries). Standardization methods are not used. Recoding rules are shown in Table 15 in Appendix 2.

	Pooled-between solution		**Algeria, 2002**		**Japan, 1990**		**Netherlands, 1990**	
	1	2	1	2	1	2	1	2
religious service (1+/month)	**.72**	.02	**.74**	.06	**.67**	.06	**.77**	-.12
religious	**.77**	.09	**.67**	.16	**.76**	-.03	**.80**	-.14
life after death (believe in ~)	**.71**	-.10	.02	**.71**	**.39**	-.26	**.69**	.10
comfort and strength from religion (get ~)	**.83**	.11	.32	**.60**	**.80**	-.01	**.84**	-.11
subversive action (might do or have done)	-.10	**-.58**	**.32**	-.30	.06	**-.57**	-.15	**-.67**
reject outgroups	.05	**.44**	.30	**-.35**	-.05	**.60**	.04	**.55**
say & freedom of speech (most important)	-.03	**-.65**	**.30**	-.26	-.08	**-.38**	-.11	**-.69**
childless woman (acceptance of ~)	-.08	**-.63**	-.24	**-.41**	-.13	**-.52**	-.09	**-.54**
Eigenvalue	2.33	1.38	1.44	1.34	1.85	1.17	2.47	1.57
% explained	28.7%	17.0%	17.9%	16.6%	22.2%	14.1%	3.7%	19.5%
Tucker's phi coefficient of construct congruence			.91	.29	.96	.95	1.00	.99

Table 4 Loadings using the reduced battery at the cross-cultural level and in three countries

Note: Observed in multiple correspondence analysis (MCA) of 8 items at the cross-cultural level (pooled-between solution). Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries for the pooled-between solution). Standardization methods are not used. Orthogonal rotation of axes. Highest absolute values are in bold. Recoding rules are shown in Table 15 in Appendix 2.

The specific configuration obtained for Algeria makes sense. Throughout the 1990s, Algeria underwent a civil war that killed more than 150.000 of its citizens and paralyzed the country's economy. Pitting a military-bureaucratic elite against various currents of religious fundamentalism but also a secular opposition — the latter enmeshed in its own conflict with religious extremists —, the conflict had a strong religious component. During this period, Algerian mosques were a hotbed for antigovernment activism, and even armed insurrection (Testas 2002). These circumstances impinge on the meaning of attending religious service: rather than a simple indicator of piety, it gets infused with political undertones. The religious fundamentalist element of the conflict also explains why a preference for freedom of speech — an "anti-authoritarian" value in the cross-cultural construct — is positively correlated with the rejection of outgroups. In contrast, the second Algerian dimension shows a different variant of religiosity in which beliefs are prominent but specific forms of practice (attending service) are absent. This inactivity extends to the political domain, but without the intolerant attitude that correlates with the fundamentalist/activist variant.

In sum, none of the two Algerian dimensions is comparable with those observed in the Japanese, Dutch, and other surveys where the scales are highly congruent with the cross-cultural solution. The coefficients in Table 16 demonstrate that this is not surprising: lower configural agreement is more frequent among non-Western countries. There is no reason to assume that configural inconsistencies would be absent from Inglehart's and Welzel's[25] scales at the intracultural level, had a comprehensive study of construct equivalence been performed in their studies.[26]

1.3.1. Illustration with generation as supplementary variable

For an illustration of why religiosity and authoritarianism should not be collapsed under broader measures of "traditional values", I examine the relationship between these two constructs and generational cohorts. The comparisons in this section use scores from country surveys where both constructs show a good agreement (Tucker's phi is 0.95 or higher). The

[25] See Note *A1.2.2. Welzel's secular and emancipative values* in Appendix 1, p. 139 for details.

[26] In contrast, the Schwartz value scales have been subjected to a full test of invariance and were found to satisfy configural and metric (but not full) equivalence in 20 countries (Davidov, Schmidt, and Schwartz 2008). The analysis presented in the fourth section of this chapter, uses Schwartz's value constructs at the ecological level which are comparable between countries.

average scores for within-country partitions are relative to country means, thus not interpretable as between-country differences.

Figure 3 (p. 30) presents the relationship between our two constructs and the categorical *generation* variable. The coefficient shown is the correlation ratio (or eta-square, η^2)[27]. The dotted line connects the points where religiosity and authoritarianism have an equally strong relationship with generation as partitioning factor.[28] In most countries, generational differences are a lot more pronounced in authoritarianism than they are in religiosity. Obviously, this has to do with the fact that in many countries, the shift toward secularism has preceded the transition to less authoritarian values, as suggested by the very high correlation ratios for a number of economically developed nations. The picture might be different if more non-Western countries were included, but most of these had to be left out due to low configural congruence. The stronger relationship between generations and levels of authoritarianism is still remarkable, therefore Luxembourg and Japan, where religiosity is the more discriminating variable suggest specific patterns.

Figure 4 (p. 30) reveals that from older to younger generations, the general Western pattern is a decline in both religiosity and authoritarianism. Japan and Taiwan clearly do not fit this template. In Taiwan (surveyed in 1994), there are close to no variations in religiosity across the five ten-year cohorts born after 1930. The Japanese public, while similar to the Europeans in its increasingly secular successive generations, deviates markedly from this model in that authoritarianism stops declining in the generations born after 1940. What is more, the 1970s Japanese cohort is even more authoritarian than are their parent generations (although only those born at the beginning of that decade were represented in the 1990 sample).

[27] See Note A1.*1.3. Structuring factor and eta-square (η2)* in Appendix 1, p. 139 for the definition.

[28] Because in correspondence analysis, the emphasis is on the relationship between meaningful (discrete) properties to which subjects relate in intricate ways, partitioning variables and related coefficients are often more illustrative than correlations between continuous variables.

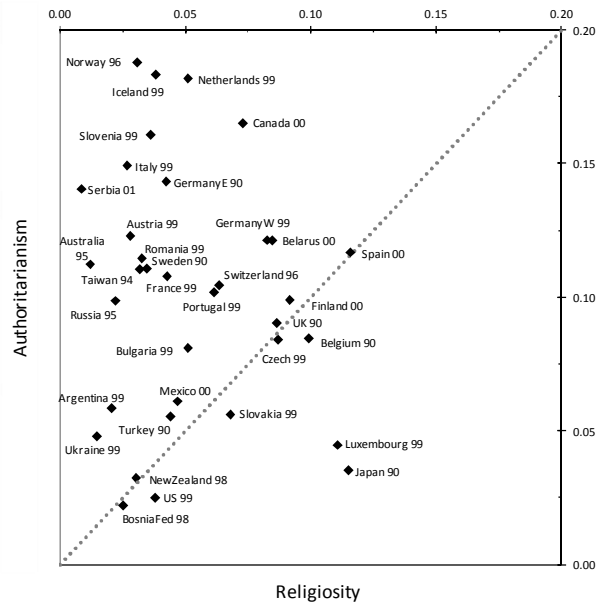

Figure 3 Correlation ratios (η^2) for the ordinal variable "generation" with religiosity and authoritarianism

Note: Data for each country are from the last available wave of the World Values Survey. Generations are ten-year cohorts born between 1920 and 1979 for each country. The dotted line indicates an equally strong relationship between the ordinal variable "generation" on one hand, and religiosity and authoritarianism on the other. Country scores for these two constructs are from separate country MCAs. Only countries achieving good configural agreement for both dimensions with the reduced 8-item pooled-between solution shown in Figure 2 and Table 4 are shown. Construct congruence coefficients at the individual level are shown in Table 16 in Appendix 2.

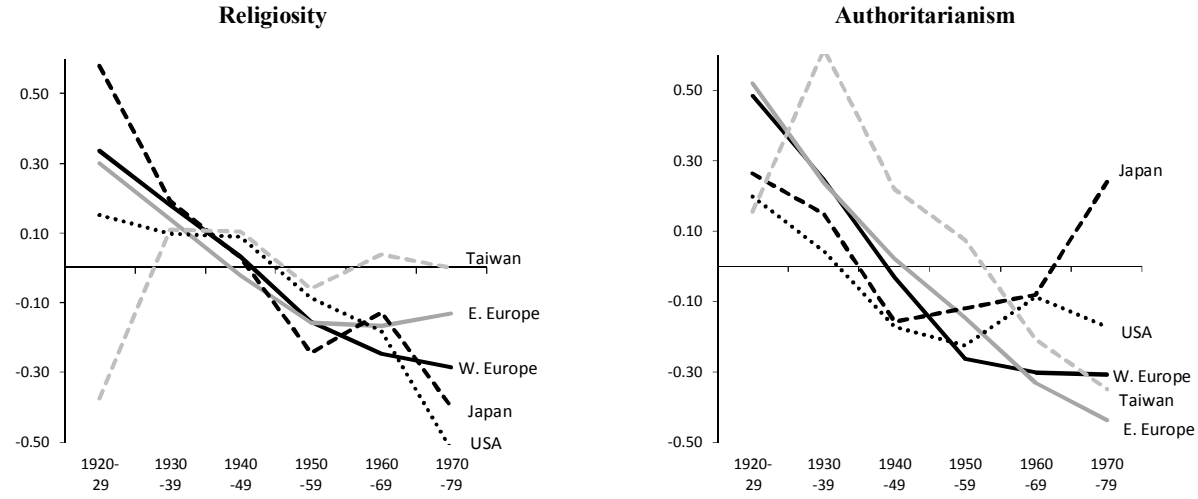

Figure 4 Religiosity and authoritarianism across 6 generational cohorts in Western and Eastern Europe, the United States, Japan, and Taiwan

Note: Data are from the 1990 wave from the World Values Survey, except for Taiwan, surveyed in 1994. Scores are from separate country MCAs using a reduced 8-item battery. All countries achieve good configural agreement for both dimensions with the pooled-between solution shown in Figure 2 and Table 4. Standard scores are relative to within-country averages (0), therefore do not represent between-country differences. The scores for Western Europe are non-weighted averages from the 1990 Austrian, Belgian, French, Icelandic, Italian, Dutch, Norwegian, Portuguese, Spanish, Swedish, British (excl. Northern Ireland), and West German surveys.

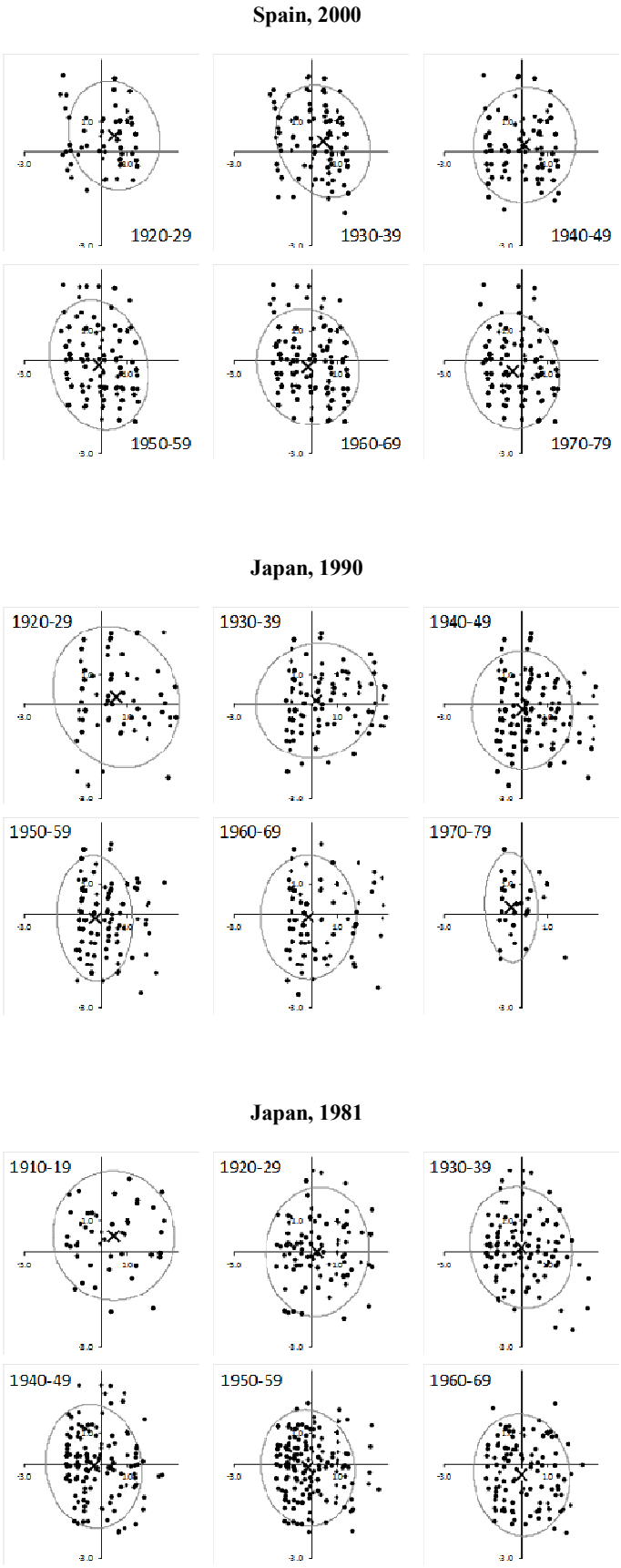

Figure 5 Generational subclouds of individuals in three country surveys along the axes of religiosity and authoritarianism

Note: Scatterplots of individual data points with concentration ellipses for each generation using the coordinates along the religiosity (horizontal) and authoritarianism (vertical) axes. 1994. Scores are from separate country MCAs using a reduced 8-item battery. "X" represents the cohort mean point. The origin (0;0) is the mean coordinate for the country survey.

In multiple correspondence analysis, given the centrality of the positioning of subjects relative to properties, there is more emphasis on the dispersion of individuals than is on average scores. Figure 5 (p. 31) illustrates this with reference to the clouds of individuals and concentration ellipses for generational subclouds.[29] The Spanish sample from 2000 is presented as the prototype of the generational cultural cleavages implied by Inglehart's value change theses and Welzel's human empowerment theory. Here, each younger cohort is increasingly secular, as well as less authoritarian. Compared with that, the Japanese subclouds from 1990 display a puzzle. The absence of a general shift toward libertarian values becomes more perceptible with the continued scattering of the cohorts in the authoritarian region (the upper part of the vertical scale). The subclouds showing the Japanese cohorts surveyed in 1981 confirm this pattern. With the exception of the 1910-19 cohort whose socialization mostly preceded World War Two and the 1960-69 cohort (partly still in their formative years when surveyed), the distribution of the generations along the authoritarianism axis show remarkable stability, and even cohort means have not moved significantly toward less authoritarianism.

Considering the impact that modernization theorists like Inglehart, Castells (2011), Giddens (1990), and Welzel (2013) attribute to individual resources on value formation and value change, these cases are significant. The absence of generational shifts toward less authoritarianism in Japan and toward secularism in Taiwan suggests flaws in the postmaterialism thesis and weaknesses of the related measures. At the time of the surveys, the Japanese and Taiwanese societies had lived through more than four decades of impressive economic growth and had been out of war since World War Two. The postmaterialism thesis predicts slight reversions to materialist and "traditional" values in times of economic crises, but at the time of these surveys, the downturn and later stagnation that Japan has experienced since the early 1990s had not yet had time to develop, and Taiwan was years ahead of the late-1990s Asian crisis. Moreover, according to this theory, it is the experience of early socialization that is decisive in the formation of values.

Unfortunately, missing data or configural inconsistencies do not allow comparisons with generational variances in other East Asian countries. Also, a general shift in values at the country level may occur without between-cohort variations. Still, we can reasonably surmise

[29] Concentration ellipses have semi-axes equal to twice the standard deviation of the subcloud in the given direction. For normally shaped subclouds, concentration ellipses contain 86% of the cloud (Le Roux and Rouanet 2010: 70).

that the Japanese and Taiwanese cases are not just outliers, and that such national patterns are better grasped with measures adapted to the local context. Bomhoff and Gu (2012) found that the self-expression-survival construct is not relevant in East Asia because the way these publics relate to European concepts of authority and trust does not fit the pattern found in cross-country correlations. The above results suggest similar problems with the secular-traditional scale.

1.4. Ecological analysis

1.4.1. Overcoming the incongruence impasse

The preceding analyses have shown that construct variance makes it difficult to compare individual values across a wide range of nations. Of the 162 country surveys selected, only 76 achieve invariance for both religiosity and authoritarianism. Still, this does not mean that these 76 surveys qualify for comparisons of country differences. In order to be comparable cross-culturally, the scores from these surveys have to be tested for also metric and scalar equivalence. The majority of the 76 country surveys would not satisfy all these three criteria, therefore meaningful comparisons would be restricted to a handful of nations. The purpose of this analysis being conclusions on cross-national differences, these conditions are prohibitive. However, these limitations do not imply that we should give up the attempts at cross-national comparisons. The dead end represented by the above, progressively more rigorous criteria precludes comparison of country averages with regard to variables measured at the *individual* level.[30] A reorientation at the ecological (country) level would extend the scope of the study beyond the few country surveys achieving scalar equivalence at the individual level.

It is to be expected that the ecological analysis will find the same latent structure at both the individual and the ecological levels (Ostroff 1993). In cross-cultural value research, examples of such parallels include Inglehart's two-dimensional typology and Schwartz's circular structure of basic values. Regarding the Inglehart constructs, the similarities are very close, given the parsimonious model discussed above (Inglehart and Baker 2000: 28). In the case of Schwartz's typology, the circular structure identified in multidimensional scaling

[30] See Note *A1.2.3. Remarks on cross-cultural comparability of constructs* in Appendix 1, p. 140.

reveals 9 or 10 orientations at the individual level (Schwartz 1992; Davidov, Schmidt, and Schwartz 2008) and 7 at the ecological level (Schwartz 1994, 1999, 2006). Further reductions yield three oppositions at the ecological and two at the individual level, the latter termed *higher-order values*. These particularities notwithstanding, the structures are comparable and express the same oppositions in substance at both levels. In particular, the opposition between autonomy[31] and embeddedness at the ecological (e) level (Figure 6, p. 35) is related to openness to change versus conservation at the individual (i) level (Figure 7), while mastery versus harmony (e) and hierarchy versus egalitarianism (e) are comparable with self enhancement versus self-transcendence (i). In short, the value emphases that differentiate national cultures are related[32] to patterns of behavior detectable at the individual level. Applied to this study, we can assume that religiosity and authoritarianism are equally relevant at the national level.

The reorientation at the country level does not mean that concerns with equivalence can be dispensed with — only that the criteria to adopt will be less strict. If the latent structure identified *at the ecological level* (that is, using a database where the units of observation are the countries) is found *within* a specific country (where the observations are the individuals), then this will be a sufficient condition for including that country in cross-national comparisons. In that regard, Schwartz's work on culture-level values provides useful guidance: his national comparisons use country scores whose reasonably equivalent meanings have been established in separate country multidimensional scaling analyses (Schwartz 1994; Fontaine et al. 2008). Still, we should bear in mind that structural equivalence at the national level is not a blank check for comparisons between entities *within* one nation. Should we want to study the values of subnational entities, as in the analysis presented in a later section of this chapter, equivalence will have to be assessed also for each of those entities.

[31] These seven poles are reduced to three oppositions since the "autonomy" pole of the autonomy versus embeddedness construct collapses "intellectual" and "affective" autonomy (Schwartz 2006: 145-149).

[32] Value researchers often use active verbs to express the hypothesized relationship between values and other aspects of social reality. For example, Schwartz writes that "a cultural emphasis on success and ambition may be reflected in and *promote* highly competitive economic systems, confrontational legal systems, and child-rearing practices that pressure children to achieve" (Schwartz 2006: 139, emphasis added). To such turns of language, I prefer — for reasons discussed in Chapter 3 — passive constructs like "is related" or neutral verbs like "correspond".

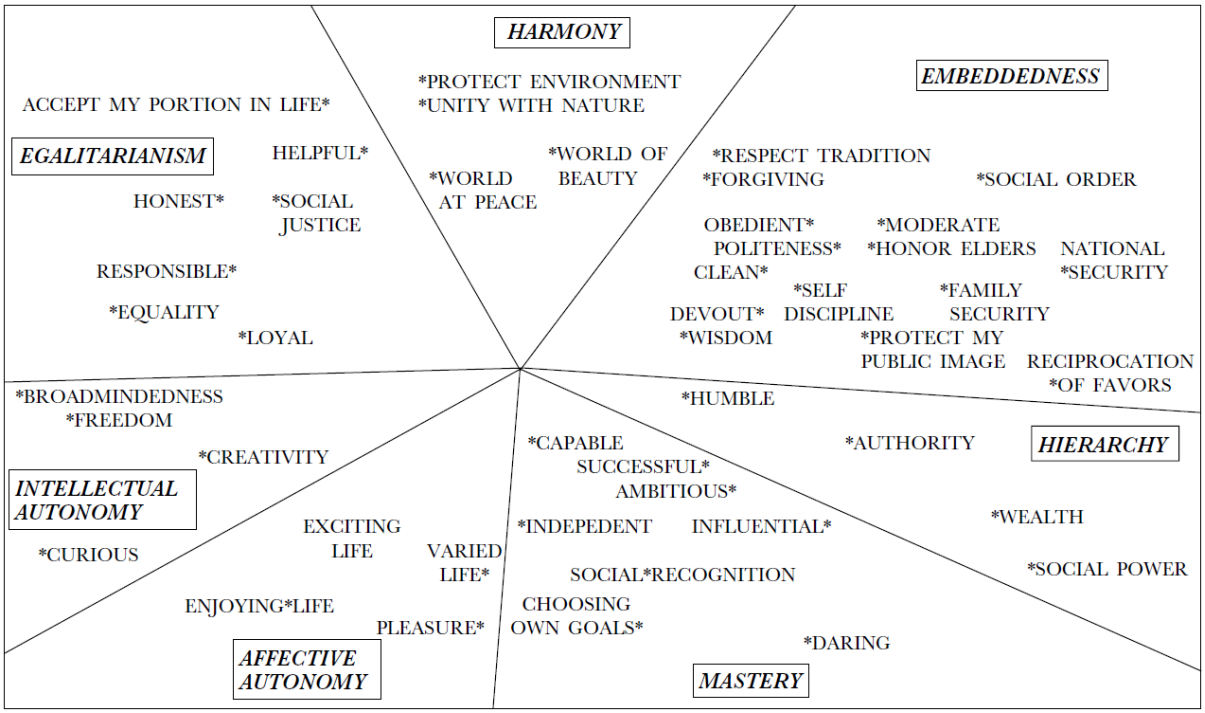

Figure 6 Empirical structure of basic values <u>at the ecological level</u>, identified in the Schwartz Value Survey

Note: Multidimensional scaling, reproduced from Schwartz 2006: 147, Figure 2.
Compare dimensions with theoretical model in Figure 7. Three value oppositions: autonomy vs. embeddedness, egalitarianism vs. hierarchy, harmony vs. mastery are used in this study for comparisons with the value constructs identified in multiple correspondence analysis.

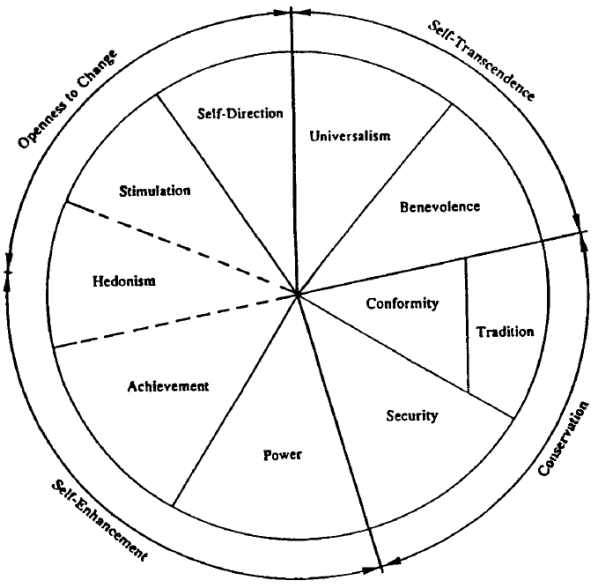

Figure 7 Theoretical model of relations among basic values proposed by Schwartz

Note: Reproduced from Schwartz 1994: 24, Figure 1. The 9 values are organized into two higher order value types: self-transcendence vs. self-enhancement and openness to change vs. conservation.

Like in the individual-level analysis, the procedure to select the country scores for comparison applied here uses the congruence coefficient Tucker's phi. Loadings from country MCAs will be tested for equivalence using the configuration obtained at the ecological level. In contrast with the country MCAs (and the pancultural analysis at the individual level presented above) where the data structure is an indicator matrix, the ecological analysis uses a summary contingency table where the rows are the countries and the columns are the sums of responses in each of the response categories. For this reason, the ecological analysis is "simple" (instead of multiple) correspondence analysis (CA).[33]

Figure 8 and Table 5 (p. 37) show that the latent structure at the ecological level is comparable with the arrangement found in the pancultural analysis presented in Figure 2 and Table 4. The oppositions are somewhat more straightforward than the structure emerging at the individual level. The Tucker's phi criterion for selecting a country for comparison is 0.95 or higher for religiosity and 0.90 or higher for authoritarianism. Fixing a lower threshold for authoritarianism is a practical consideration: in cases where the congruence of the first dimension is 0.95 or higher, there is no reason to assume that a coefficient for authoritarianism whose Tucker's phi is between 0.90 and 0.95 is indication of significant construct variance.[34] Table 17 (p. 147) in Appendix 2, shows that these criteria retain a total of 101 country surveys distributed over 53 countries (31 countries having more than one survey with invariant constructs). The comparisons in the remainder of this chapter, as well as the models discussed in Chapter 2 are confined to these scores. The diagram showing the countries with structurally equivalent scores is included in Figure 9 (p. 46) (and will be discussed in the fourth section).

[33] The binary categories presented earlier are maintained — that is, the number of columns in the contingency table including country totals is the same as in the indicator tables used in MCA. Like in the previous pancultural analysis, the procedure applies equilibrated weights (at 1.000) for each country sample.

[34] In such instances, given the orthogonal latent structure, the items constituting the religiosity dimension have no "residual loading" (that is, variance unexplained by religiosity) that could be "drained away" by the authoritarianism dimension, which would result in a construct that differs significantly from the benchmark. This condition is not met in the 2002 Algerian sample whose loadings are presented in Table 4: there, a Tucker's phi of 0.91 for the first, combined with an even lower (0.21) congruence coefficient for the second dimension means that relative to the test values, the significantly incongruent loadings in the second dimension are related to an inconsistent first dimension. (The database containing the loadings for the 162 country surveys from the ecological analysis is available upon request.)

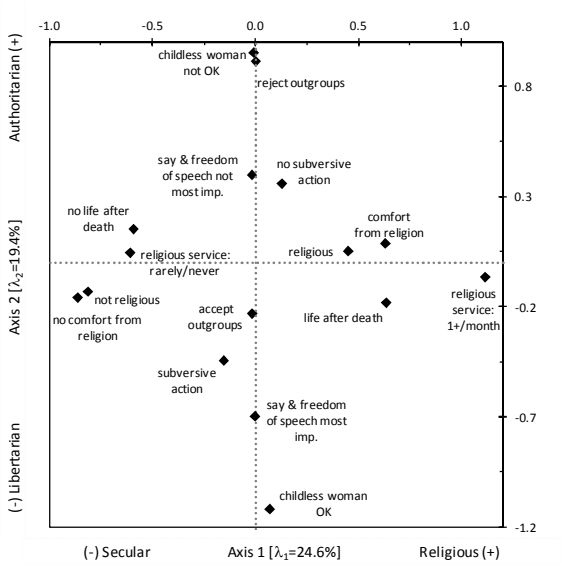

Figure 8 Ecological analysis: cloud of modalities from rotated MCA solution

Note: Plane 1-2 for the reduced 8-item battery observed in multiple correspondence analysis (MCA) at the ecological level. Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries). Standardization methods are not used. Orthogonal rotation of axes. Recoding rules are shown in Table 15 in Appendix 2.

	1	2
religious service (1+/month)	**-.726**	-.035
religious	**-.756**	-.080
life after death (believe in ~)	**-.706**	.086
comfort and strength from religion (get ~)	**-.820**	-.113
subversive action (might do or have done)	.103	**.575**
reject outgroups	-.028	**-.496**
say & freedom of speech (most important)	.026	**.619**
childless woman (acceptance of ~)	.088	**.619**
Eigenvalue	2.40	1.89
% explained	24.6%	19.4%

Table 5 Ecological analysis: loadings from rotated MCA solution

Note: Observed in multiple correspondence analysis (MCA) of 8 items at the ecological level. Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries for the pooled-between solution). Standardization methods are not used. Orthogonal rotation of axes. Highest absolute values are in bold. Recoding rules are shown in Table 15 in Appendix 2.

Applying the same congruence criteria to Inglehart's constructs from the period selected for the Inglehart-Baker global cultural map (waves 1 to 3 of the WVS, conducted between 1981 and 1998), the ratio of countries with comparable scores is significantly lower. Table 18 (p. 148) in Appendix 2 shows the construct congruence coefficients for the secular-traditional and self-expression-survival value constructs presented in Table 2. (This data reduction uses principal component analysis in order to be compatible with Inglehart and Baker's study.) Out of 102 separate country surveys, only 31 (30%) have invariant constructs for both dimensions — the scores from the remaining 71 country survey are not comparable. Figure 14 (p. 149) in Appendix 1 shows the locations of the countries with both congruent and incongruent latent constructs from the last available country surveys from this period.[35] At this level, the ratio of nations with comparable scores is even lower: 13 out of 64 (20%). In other words, *most of the country locations which constitute the crux of Inglehart's account of cross-cultural differences in his typology do not correspond to comparable measures*. This raises concerns with all subsequent chapters of his empirical analyses where these measure feature prominently — most significantly with regard to secularization (Norris and Inglehart 2004) and human development (Inglehart and Welzel 2005).

1.4.2. Correlations with other indicators

1.4.2.1. Schwartz's values scales

Before turning to relative country positions in the space defined by religiosity and authoritarianism, a look at the correlations with Schwartz's values provides further clues as to the substance of these constructs. This brief review is necessary on several counts. First, we need instruments from other research programs as substantive references, and given the concerns with Inglehart's scales, Schwartz's structurally equivalent constructs are a compelling choice. Second, the religiosity and authoritarianism indicators proposed in this study do not measure *basic* values. Following Schwartz, basic values are (1) "beliefs that are linked to affect"; (2) "refer to desirable goals that motivate action" (3) "transcend specific actions and situations" (4) "serve as standards or criteria that guide the selection or evaluation

[35] These country scores come from a reanalysis of WVS data, therefore are not identical with the scores used by Inglehart and Baker in their global cultural map presented in Figure 10. The country locations in the two maps nevertheless show a comparable arrangement, as expected. The comparisons between the latent structure obtained with correspondence analysis and Inglehart's constructs use the Inglehart-Baker map as reference.

of actions, policies, people, and events"; (5) "are ordered by importance relative to one another to form a system of priorities"; and (6) their "*relative* importance […] guides action" (2006: 143, emphasis in the original). Concerning religiosity and authoritarianism, while their relatedness to basic values is beyond doubt, the above criteria do not apply in their entirety. Regardless of their embeddedness in the fabric of everyday life, they do not transcend specific actions and situations (condition 3) and are not ordered in a system of priorities (conditions 5 and 6). Compared with Inglehart's constructs, where some of the original items measure transient attitudes (e.g., "happiness" or the importance of "fight rising prices"), the religiosity and authoritarianism instruments measure more stable dispositions. (As pointed out above, the arguments in their favor include that consideration.) Nonetheless, they are more situation-bound than Schwartz's dimensions. For example, one's attachment to religion can decline without a significant change in a related basic value like embeddedness. Or the proposed measure of authoritarianism is more susceptible to variations because it is a more parsimonious construct than Schwartz's hierarchy versus egalitarianism dimension.[36] The absence of ordering means that these scores do not express how religion or authority rank in relative importance in subjects' life: they only capture differences relative to an average defined with reference to the observations at a specific analytical level. (A global mean score in the ecological analysis.) Using the Schwartz instruments helps link these dimensions to basic values: this should be seen as an aid to interpretation.

Finally, since the countries with incongruent religiosity and authoritarianism scales were eliminated from further study, the analysis is confined to a smaller (albeit not culturally homogeneous) set of nations. Most of the 53 countries passing the construct equivalence test belong in the European civilization. This is less of a hindrance for the purpose of the country comparisons discussed in the remainder of this chapter, but becomes a limitation in the study of the relationship between values and economic growth, an aspect examined in Chapter 2. The regressions in that chapter require a global coverage, and Schwartz's three value instruments will be used as independent variables in additional models whose results will provide insight that might not emerge from the models relying on a smaller number of countries.

Table 6 (p. 40) shows the correlations between the two dimensions proposed as alternatives to Inglehart's constructs and Schwartz's three instruments. The scores come from

[36] See earlier remark on the limitations of the variable pool available from the WVS.

51 countries where both sets are available and emerge at the ecological level.[37] Schwartz has derived his scores from a multidimensional scaling of 45 value items collected by the Schwartz Value Surveys (SVS) of college students and schoolteachers between 1988 and 2000 (Schwartz 2006). Figure 6 (p. 35) shows the two-dimensional projection of the arrangement emerging from this analysis. This empirical organization validates the theoretical structure of the higher-order value oppositions, shown in Figure 7.

	Religiosity	Authorita-rianism
Autonomy vs. embeddedness	-.42**	-.65**
Egalitarianism vs. hierarchy	-.04	-.49**
Harmony vs. mastery	-.41**	.04

Table 6 Correlations between the values identified in MCA and Schwartz's three scales

Note: Ecological analysis, N=51.
* p < .05, ** p < .01

The autonomy versus embeddedness scale captures the extent to which a culture emphasizes individuality, as opposed to the priority given to the collectivity. The egalitarianism versus hierarchy dimension translates the opposition between viewing society as composed of morally equal individuals on the one pole, and justifying the unequal distribution of resources as natural, legitimate and necessary on the other. Harmony versus mastery expresses the quality of the relationship between the individual on the one hand, and the natural and social world on the other; and ranges from unity, acceptance, and understanding to change, self-assertion, and exploitation. Since the corresponding axes in MDS are not orthogonal — meaning semantic affinities between adjacent values —, these three constructs are correlated.[38]

The strongest association is found between autonomy and authoritarianism. Authoritarian communities put restraints on personal autonomy and require submission to external forces regardless of one's will. Autonomy is also negatively related to religiosity,

[37] 22 countries from Schwartz's study for which scores on religiosity and authoritarianism are not available were left out.

[38] Refer to Table 8 (p. 44) for these correlations.

albeit to a lesser extent.[39] This is because religiosity — as operationalized in this study: independent of authoritarianism — captures the religious outlook in the most general sense, which stresses the importance of the sacred as opposed to the profane. And, as Durkheim (2001) argued, the sacred pole of this opposition is associated with an emphasis on social ties, whereas irreligion means a weakening of those ties. These distinctions are important in order to understand that autonomy's significant correlation with both authoritarianism and religiosity does not invalidate the argument against the conflation of the two latter dimensions under a single construct. These correlations merely indicate that religiosity and authoritarianism are related to different aspects of the opposition between autonomy and embeddedness. And inversely: embeddedness does not fully account for either authoritarianism or religiosity.

The latter suggestion finds further support in the negative correlation between egalitarianism and authoritarianism. An emphasis on hierarchy — in the above sense, that is, viewing human beings as inherently unequal in worth — is an expected proxy for authoritarianism. The robustness of the religiosity score is demonstrated by its zero correlation with the egalitarianism versus hierarchy dimension: since it measures religiosity without the contaminating effect of authoritarianism, the absence of association is predictable. On the other hand, if religiosity, as measured by this instrument had a significant ecological association with caritas, we would find a positive correlation with egalitarianism. In other words, this zero correlation also indicates the diversity of religious orientations with regard to social inequalities at the level of national cultures. This hypothesis is further nuanced by religiosity's negative correlation with the harmony versus mastery scale: harmony, as operationalized in the Schwartz typology is not a "pre-modern", but rather a "post-industrial" value. However, given that in the circular arrangement, harmony and embeddedness are adjacent values, there exists some affinity between these two values — although a remote, much weaker one than between harmony and egalitarianism.[40] Finally, the absence of

[39] This finding is in line with Schwartz's conclusion that "(t)he autonomy/embeddedness dimension gives less weight to religious faith. It focuses more on how legitimate it is for individuals to cultivate unique ways of thinking, acting, and feeling vs. submerging the self in an encompassing collectivity. […] At the same time, the low scores on autonomy/embeddedness suggest that the culture still stresses finding meaning through ties to the in-group." (Schwartz 2006: 150)

[40] While in topographical terms, embeddedness is a value adjacent to harmony (to the right, counterclockwise in Figure 6), the two constructs are negatively correlated (Table 8, p. 44). This is because in the empirical organization of basic values, harmony is closer to autonomy (the opposite of embeddedness).

association between authoritarianism and the harmony versus mastery dimension is also expected as both poles of the latter scale include elements related to an anti- (or post-) authoritarian outlook.

1.4.2.2. Socioeconomic indicators

The Inglehartian postulate of value change in a common direction in predictable patterns as a result of economic development[41] can be saved if we found that higher levels of per capita GDP systematically correspond to different values. While the trajectory implied in this postulate does not mean convergence, because "cultural change seems to be path dependent" (Inglehart and Baker 2000: 49), it does suggest a correlation between economic output and values. The coefficients shown in Table 7[42] (p. 44) suggest that this is only partly true. Per capita GDP correlates with authoritarianism but not with religiosity, which is a further indication that the secular versus traditional construct is misleading. While the 50 plus countries for which we have meaningful constructs do not allow for even a cautious generalization, these findings are at odds with both the postmaterialism thesis and its later, nuanced version focusing on "postmodernization" (Inglehart 1997). It can be nonetheless inferred that the authoritarian variant of religiosity is more likely to weaken with rising national income. Of Schwartz's instruments (Table 8), per capita GDP's strongest and second strongest correlation with, respectively, autonomy and egalitarianism are expected on the basis of the latter's relationship with the authoritarianism scale.

In contrast, income inequality (as measured by the Gini coefficient) positively correlates with religiosity, but not with authoritarianism. This corroborates the thesis that in the absence of a comprehensive welfare system, the various social services performed by religious institutions are instrumental in sustaining religiosity (Haller 2002). In this regard, Inglehart's proposition that "rising security tends to produce a shift toward secular values" (Inglehart and Baker 2000: 42) finds empirical support — with the important proviso that levels of existential *security* are often not captured by per capita GDP (the proxy for economic security in Inglehart's models). In this respect, the United States might not be as "deviant" a case as

[41] Inglehart's use of the term "economic development" signifies economic *growth*.

[42] Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the variables used in the correlations and regressions.

suggested by Inglehart (ibid.): starting from the early 1970s, real per capita wages in America have declined despite significant increases in productivity and per capita GDP.[43]

[43] Discussing the processes leading to the Great Recession of the late 2000s, Ivanova notes that in the United States, "ever since the early 1980s, total weekly private earnings, measured in constant dollars, have been significantly lower than in the 1960s and the 1970s", and that "(i)ncome growth for 95 percent of the population has slowed down over the last three decades but stagnation has been most pronounced in the lower-income brackets" (2011: 342-43).

	Religio-sity	Authorita-rianism	Per capita GDP (logged)	Income inequa-lity	Democ-racy	Political violence
Authoritarianism	-.003					
Per capita GDP (logged)	-.259	-.787**				
Income inequality	.567**	.106	-.383**			
Democracy	-.153	-.507**	.690**	-.189		
Political violence	.214	.499**	-.615**	.276	-.298*	
Physical integrity	-.197	-.710**	.795**	-.356*	.625**	-.579**

Table 7 Correlations between the values identified in MCA and socioeconomic indicators

Note: Value scales from ecological analysis, *N*=45. The value scores are from the last available survey for each country. The socioeconomic indicators are from the year of the country survey. Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the indicators.

* p < .05, ** p < .01

	Autonomy vs. embedded-ness	Egalitaria-nism vs. hierarchy	Harmony vs. mastery	Per capita GDP (logged)	Income inequality	Democ-racy	Political violence
Egalitarianism vs. hierarchy	.575**						
Harmony vs. mastery	.283*	.572**					
Per capita GDP (logged)	.832**	.614**	.263*				
Income inequality	-.387**	-.393**	-.327**	-.369**			
Democracy	.671**	.488**	.337**	.665**	-.224		
Political violence	-.318**	-.475**	-.257*	-.450**	.231*	-.294*	
Physical integrity	.654**	.600**	.274*	.750**	-.422**	.559**	-.675**

Table 8 Table Correlations between Schwartz's three scales and socioeconomic indicators

Note: Value scales from ecological analysis, *N*=65. The value scores are from survey conducted between 1995 and 2000, the socioeconomic indicators from 1996. The Schwartz value scales are correlated because corresponding to axes in multidimensional scaling that are not orthogonal. Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the indicators.

* p < .05, ** p < .01

1.4.3. Nations

Figure 9 (p. 46) shows the positioning of countries in the space of religiosity and authoritarianism. The interpretation of the results and the comparisons with the Inglehart-Baker (henceforth: IB) cultural map (2000: 29, reproduced here in Figure 10,[44] p. 47) should take into account the following. First, as this study excludes all cases from the comparison where structural equivalence could not be established at the individual level, *my typology has a narrower global coverage* than what has become common in the Inglehart school. As we have seen, Inglehart's secular-traditional and self-expression-survival constructs are not comparable in the majority of countries — which at the same time constitute most of his cultural typology. Second, since the construct capturing "actual" materialism in *this* study has not been found configurally invariant, the comparisons with the IB cultural map focus mainly on the latter's secular-traditional (vertical) scale — although, as we have seen, the heterogeneity of Inglehart's constructs mean that the self-expression-survival scale is also related to authoritarianism.[45]

A noticeable difference with regard to the IB map is the dispersion of ex-communist countries along mainly the religiosity, but to some extent, also the authoritarianism axis. In the IB map, these countries cluster in the secular range of the corresponding scale — the few exceptions include Poland, Bosnia, Azerbaijan and Georgia. The new map however, shows that there are more important differences between these countries in terms of religiosity than the secular-traditional scale suggests. Countries that in the IB map appear to be secular, like Slovakia, Croatia, and Romania are in reality more religious than the cross-national average. The difference is striking with regard to some republics of the former Soviet Union and Yugoslavia. In the IB map, Russia and Lithuania are in essence equally secular, but this apparent similarity results from the fact that in Inglehart's secular-traditional scale, religiosity is conflated with authoritarianism. In reality, Lithuanians are significantly more religious than Russians — more or less on pairs with the inhabitants of Austria, Canada, Macedonia, and Azerbaijan. The Lithuanian society is also much less authoritarian than the Russian. Using

[44] Although the authors of the article in which this cultural map is presented are Inglehart and Baker, I continue to refer to these instruments as Inglehart's measures because of its antecedents and later applications in Inglehart's work.

[45] A further limitation is that the comparisons are restricted to the first four waves of the World Values Survey. The databases for the subsequent waves (5 and 6) either included too many missing data or were not available in a final, fully cleaned version at the time of this study.

Inglehart's construct, Macedonia, Croatia and Slovenia appear almost equally secular, whereas the former two are rather religious societies — partly because religion played a significant role in the resurgence of Macedonian and Croatian national identity in the wake of the disintegration of Yugoslavia. Indeed, Croatia is one of the most religious among the European countries for which we have comparable data: it is on pairs with Italy, and second only to Ireland. Even Romania is more religious than what is suggested by the IB map.

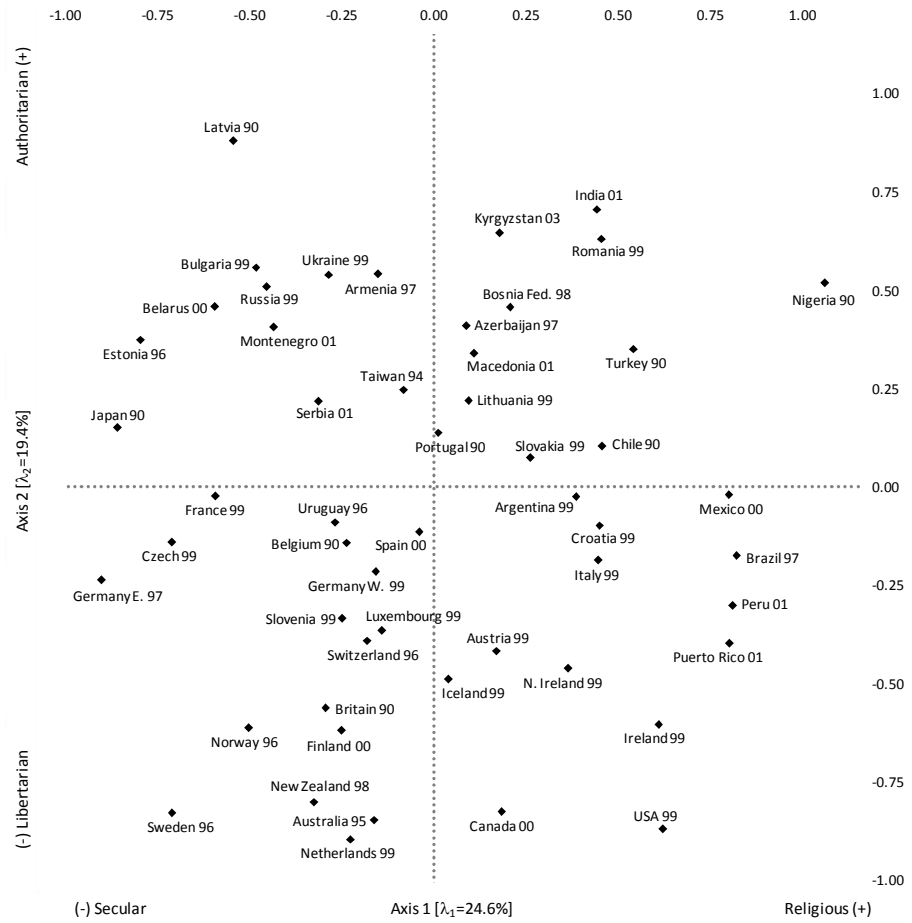

Figure 9 Locations of 53 societies on the dimensions of religiosity and authoritarianism

Note: Correspondence analysis at the ecological level. Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries). Only countries with structurally equivalent constructs are shown — scores are from the last available survey. Refer to Figure 8 for the arrangement of the modalities and Table 17 (p. 147) for the country congruence coefficients.

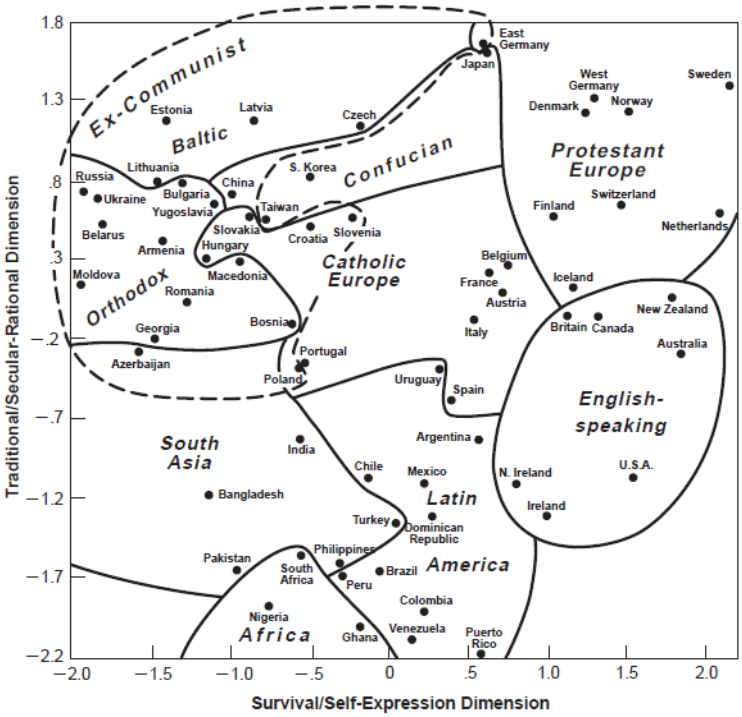

Figure 10 Locations of 65 societies on the dimensions of secular-traditional and self-expression-survival values

Note: Reproduced from Inglehart and Baker 2000: 29, Figure 1. Data are from the World Values Survey, waves 2 and 3 (1990-1991 and 1995-1998).

The nations regarding which Inglehart's secular-traditional typology is *not* misleading are the few societies characterized by a combination of strong religiosity and authoritarianism, and their opposites: Nigeria, Turkey and India on the one hand, and libertarian and secular North-Western Europe on the other. Given that most developing and Third World-countries had to be excluded from the ecological analysis, the quadrant corresponding to higher degrees of both religiosity and authoritarianism is less "crowded" than the other quadrants.[46] *In the case of most other countries, there are significant*

[46] Since in most developing countries, the two constructs show too much variance to be included in cross-national comparisons, the inclusion of Nigeria, the most populous African country might seem surprising. As shown in Figure 11 (p. 51), it is thanks to its Christian population that the religiosity and authoritarianism indicators for that country pass the test of construct equivalence. They are not comparable with regard to Nigerian Muslims, but the demographic weight of Christians is such that overall, these two constructs achieve configural equivalence. But this difference raises an important point: cross-cultural research should pay more attention to configural specificities that may exist *within* nations. Whereas ecological analyses typically use the

differences in terms of religiosity and authoritarianism that go undetected using the Inglehart scale. For example, the persistence of traditional values in Latin America, as suggested by Inglehart's instrument is questionable. In the IB map, historically Catholic societies discriminate into two wider subclusters, with Latin American societies constituting a more traditional variant. This is an oversimplification: with the exception of Chile, none of the Latin American nations are authoritarian. In fact, while still religious, their publics are around as libertarian as several West-European societies. Given the influence of Liberation Theology (E. N. Evans 1992) during the late 20th century, this is hardly surprising.

Since this alternative analysis includes fewer countries than does Inglehart and Baker's, it is difficult to isolate coherent historical and cultural clusters. Yet, a close inspection suggests that their categorization into "cultural zones" — a typology relying on Huntington's classification of civilizations (1996) — is moot. For example, Inglehart argues that the accelerated technological innovation and high rates of economic growth in a number of East Asian countries, like Japan, South Korea, and Taiwan can be traced back to a "Confucian" value orientation that is "similar" to the modernization "effects" of the Protestant ethic (Inglehart 1997; Hofstede and Bond 1988).[47] The IB cultural indicates similarities between the dominant values of North-West European societies and Japan, the latter closely aligned with "Protestant Europe". But making the crucial distinction between religiosity and authoritarianism and abandoning the confusing self-expression-survival dimension, these parallels disappear, and the location of Japan suggests more similarities with Eastern Europe: secular *but* authoritarian. If there was indeed a Confucian cultural paradigm reminiscent of the value system of late modern North-Western European societies, such a configuration would be difficult to defend: Inglehart and other scholars in this research tradition (e.g., Welzel 2013) argue that, at advanced stages of the economy, authoritarianism is inimical to economic growth because it does not foster creativity, a necessary condition for technological innovation.

It is also doubtful whether "historically Protestant" nations form a coherent cluster. Societies with sizeable Protestant communities that can be traced back to the Reformation range from the Eastern part of Germany to the United States. Their dispersion along the two

country as the unit of observation, religious, ethnical, linguistic or other divisions may run so deep in some countries that it is legitimate to treat these subnational units separately.

[47] My use of the term "cultural zones" refers to Inglehart's use of this concept (borrowed from Huntington): cultural heritage based on a dominant religious tradition.

axes in Figure 9 reveals variations that are more significant than what is suggested by the IB map. Moreover, if Western Germany was indeed part of the Protestant cultural zone, its alignment with those Western European nations where Catholicism is the dominant religion is surprising. Also misleading is the "Anglosphere", which the IB typology isolates as a specific cultural configuration: being secular and libertarian, three English-speaking nations: Britain, Australia, and New Zealand have more in common with North Europeans than with the United States, Canada, and Ireland — which, while libertarian, are significantly more religious nations. Furthermore, in terms of religiosity, Canada is much less closer to the former three countries, than what follows from its position along Inglehart's secular-traditional scale in the IB map.

With regard to the United States, the new axes help resolve the puzzle raised by Inglehart and Baker. In their study, they isolate the United States as "a deviant case, having a much more traditional value system than any other advanced industrial society" (Inglehart and Baker 2000: 31) and, citing Lipset (1988), interpret this finding as evidence of "American exceptionalism".[48] An alternative interpretation is suggested in Figure 9 where the location of the US indicates no deviance from the advanced industrial paradigm: a highly religious but at the same time definitely *not authoritarian* society. In the IB map, Americans appear to have retained a traditional value system simply because Inglehart's typology does not differentiate between actual religiosity and actual authoritarianism. In this respect, *the US is hardly an outlier*: it is not significantly more religious than Italy and Croatia, and, even more importantly, much less "traditional" than most advanced industrial societies in the sense of being the least authoritarian. (The not significant correlation between per capita GDP and religiosity, shown in Table 7 is another indication that the postulate of "American religious exceptionalism" in the sense suggested by Inglehart needs revision.) The disappearance of the inconsistencies regarding the values of Americans is a further argument in favor of the more nuanced indicators presented in this study.

[48] Discussing the processes that led to the formation of the American Republic, historian Gerald Horne (2014) argues that religious heritage is far less significant than suggested by the dominant, mostly ideological understanding emphasizing the early settlement by various Protestant communities (e.g., Puritans) and the religion of the "founding fathers". A more important consideration was the rallying of European whites behind an economic system based on slave labor, the development of which called for the abandonment of the religious conflicts that in the 18th century were still influential in European politics. I revisit this issue in Chapter 2 in connection with economic growth.

On the other hand, Inglehart's argument concerning the influence of the heritage of political regimes, like communism seems plausible. Indeed, with the exception of East Germans, Slovenes and Croats, most post-communist publics are authoritarian. In terms of religiosity, communism's secular imprint is less consistent, albeit still apparent in many countries. Yet, Inglehart's instruments conceal some important features of post-communist heritage. For example, a lot of formerly communist countries have populations nearly as religious as major developing nations like India — an important finding which does not come across the IB map. The latter map also includes a Baltic sub-cluster within the communist zone. In the new map, however, the respective locations of Estonians, Latvians, and Lithuanians suggest significant differences between their values.[49] In sum, if the combination of secular and authoritarian values corresponds to a "core" (post-)communist pattern, then it is found in less than half of the post-communist nations for which structurally equivalent scores are available. Still, the similarities with Taiwan and especially Japan suggest that this combination is not the exclusivity of communist heritage.[50]

[49] While Latvia's scores are computed from a from a survey conducted in the year preceding its secession from the Soviet Union, Lithuania's come from a sample collected a decade later. (The scores from the more recent Latvian surveys were not found to be sufficiently invariant for comparisons — see Table 17 (p. 147) in Appendix 1.) With this time factor in mind, these differences are still important. On the other hand, a wide time frame is not prohibitive: Inglehart and Baker's map includes scores from samples collected between 1990 and 1997. The largest difference in this comparison is 11 years.

[50] China is left out from this comparison because of missing data.

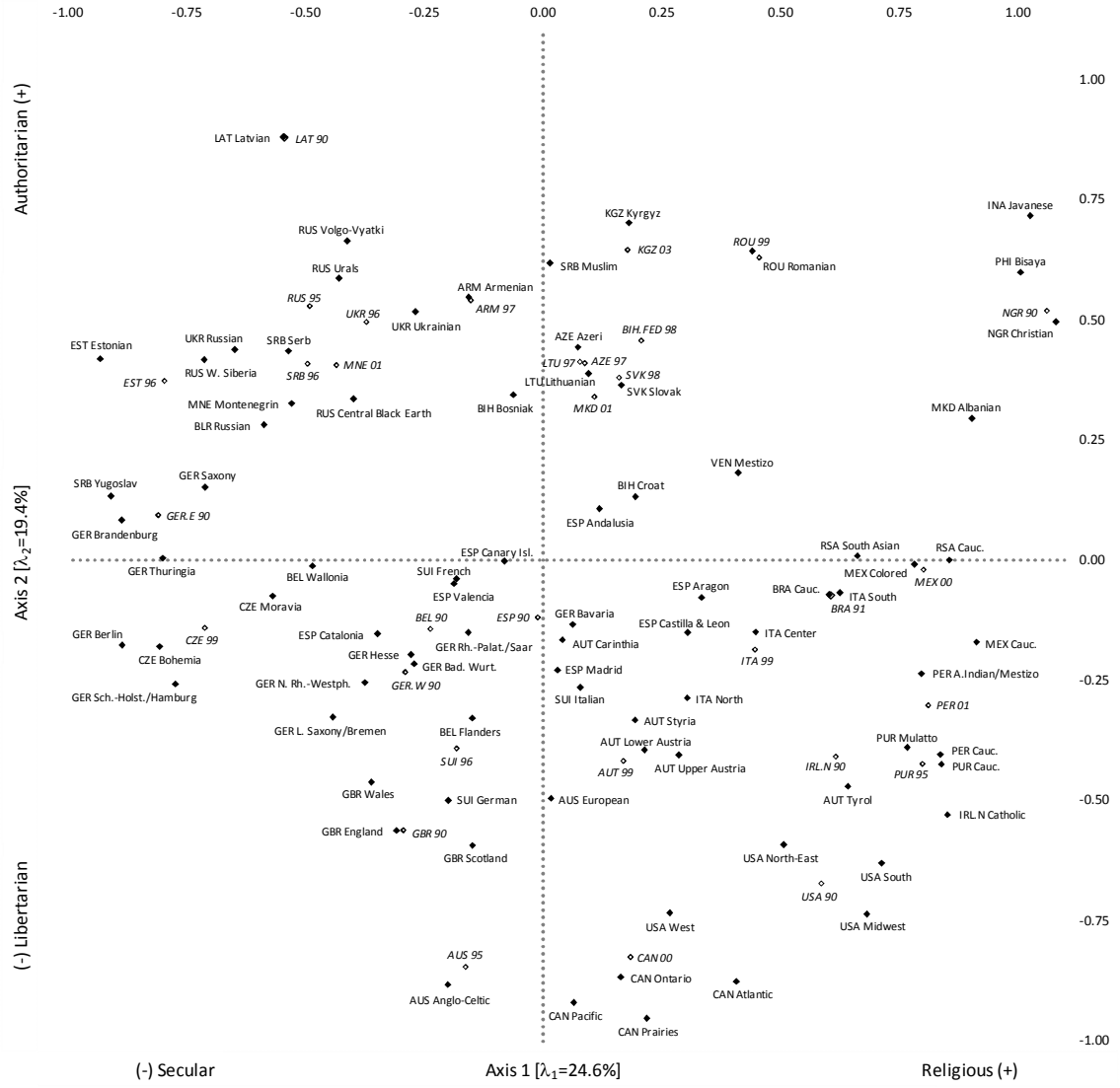

Figure 11 Locations of subnational entities on the dimensions of religiosity and authoritarianism

Note: Correspondence analysis at the ecological level. Subnational entities are supplementary observations — that is, they do not contribute to the configuration derived from the countries x modalities contingency table. Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries). Only entities with structurally equivalent constructs are shown. The overall country score is indicated by the three letter-code and the survey year (e.g., SUI 96 in the case of the 1996 Swiss sample).
ARM Armenia; AUS Australia; AUT Austria; AZE Azerbaijan; BEL Belgium; BIH.FED Bosnia Fed.; BLR Belarus; BRA Brazil; CAN Canada; CZE Czech; ESP Spain; EST Estonia; GBR Great Britain, excl. N. Ireland; GER.E/W Germany East/West; INA Indonesia; IRL.N Northern Ireland; ITA Italy; KGZ Kyrgyzstan; LAT Latvia; LTU Lithuania; MEX Mexico; MKD Macedonia (FYR); MNE Montenegro; NGR Nigeria; PER Peru; PHI Philippines; PUR Puerto Rico; ROU Romania; RSA South Africa; RUS Russia; SRB Serbia; SUI Switzerland; SVK Slovakia; UKR Ukraine; VEN Venezuela

1.4.4. Subnational divisions

Figure 11 (p. 51) expands the cross-cultural comparisons to subnational divisions whose selection includes two considerations. The first is that the subnational units have to represent entities with distinct *cultural identities* constitutive of the historical heritage of their respective societies. As implied in Schwartz's study of values at the ecological level (1994, 2006), distinct identities involve different cultural emphases — therefore it is only when such identities are strong enough that an ecological analysis is warranted. Variations of national identity may range from minor (e.g., regions of Austria) to substantial, to the point of corresponding to attachments that are more important than being the citizen of the country in question (e.g., regions of Belgium). The discriminating variable can be anything (region, religion, ethnicity, ancestry, etc.) depending on the national context.[51] Race is included only when it corresponds to sociologically relevant variations of *national identity*.[52] Countries where such distinctions are not relevant or are not available from the WVS dataset are excluded from this analysis.[53] Second, the criterion of structural equivalence is maintained: subnational units whose religiosity and authoritarianism constructs do not pass the test of invariance presented in the earlier sections are excluded.[54] This precaution would be

[51] The regions of Russia constitute an exception: there are no significant regional variations of Russian identity but given the country's size, the comparisons are of interest. (Information on ethnicity was unavailable for the Russian sample.) The Czech regions of Bohemia and Moravia are near exceptions: although after the dissolution of Czechoslovakia, these historical regions have not been reestablished as federal units, they continue to influence regional identities to some limited extent.

[52] For example, even if information on race was available for the French sample, it would be left out from this analysis because, at the time of writing, there is no *racialized* variant of French identity. This is not to say that race is unimportant in France or that various sectors of the French population defined on the basis of race relate to their country in the same fashion. Such differences exist and impact the lives of its citizens — e.g., in the form of discrimination —, but do not involve different templates of *national* identity (Safran 1991). In countries like Brazil, race is an important component of national identity (Skidmore 1993), and is therefore taken into consideration.

[53] In some countries, significant variations of national identity exist with reference to more than one variable. In these cases, the divisions reflect the information available in the WVS for the specific survey wave where the equivalence of the constructs was established at the country level. This explains why in the case of the United States, the subdivision refers to statistical regions, and not to ancestry and race (Hispanic, white and Afro-Americans).

[54] As a result, a number of units had to be dropped from the comparison, like the region of Brussels Capital in the case of Belgium or Protestants in the case of Northern Ireland.

unnecessary if the equivalence of our constructs had been established at the *individual* level. Since it is established at the *country* level, it should be tested for the purpose of every subsequent comparison where the unit of analysis is different. (Inglehart's studies regularly compare the values of generational cohorts across countries without evidence of comparable latent structures.) In addition, the analysis includes a number of subnational entities for countries (Venezuela, Macedonia, the Philippines, and South Africa) where the two constructs are equivalent only at the level of these units, but not at the national level.[55] Given this incompleteness, no conclusion regarding the country can be drawn from the scores of these latter units.

The dispersion of the subnational units along the axes of religiosity and authoritarianism reveals important nuances within national profiles. Some of the subdivisions have values that demarcate them from their mother nations. The most striking differences are found within small nations like Belgium, and especially Austria. Within Austria, Tyrol is an outlier because as religious as Northern Ireland, Southern Italy, the United States, and some South American nations, while Carinthia is much closer to the West-European profile. The location of the German States confirms their various historical trajectories: whereas the values of East Germans in Saxony and Brandenburg are close to the East European profile (albeit still less authoritarian), Bavarians are almost as religious as Austrians, and, at the same time, very similar to Carinthians, and closer to even North Italians than to East Germans along both axes. Moreover, with the exception of the two abovementioned parts, the States of Germany differ mainly in religiosity. In contrast, Italy becomes progressively both more religious and more authoritarian as one moves from the North to the South. The other example of significant regional polarization is Spain: Castilla and Leon, as well as Aragon have more in common with Brazil than with Catalonia — which, in turn, is closer to (and also more secular than) the West-European median.

Values are also associated with ethno-religious and sometimes linguistic divisions — although it is less clear whether such differences reflect cultural heritage or regional

[55] A further constraint is that when a country has several surveys with structurally equivalent scores at the subnational level, the scores selected for this map come from the survey with the highest number of comparable subdivisions. As a result, the national median profile shown in this diagram may differ from the one in Figure 9. For example, in the case of both East and West Germany, Figure 9 shows the scores from, respectively, 1997 and 1999 because these are the last surveys where these scores are comparable. Yet, for the comparison between subnational units, the diagram shows the scores from the 1990 for both Germanys since there are more States (Länder) with invariant constructs from this than there are from the later surveys.

disparities in economic development. Belgium is an illustration: Flemings are not far from the median West-European profile (libertarian but moderately religious); Walloons are more secular and somewhat authoritarian — as such, they are very close to France and the least authoritarian fringe of Eastern Europe. This might appear as a puzzle: the fact that influential currents of Flemish nationalism[56] (which as a whole has become more influential over the last decades) have authoritarian tendencies is clearly not reflected in Flander's position relative to Wallonia. The evolution of Flemish identity is probably less influenced by such aspects of party politics, and is more sensitive to the economic component of the inter-Belgian conflict pitting a thriving, postindustrial Flanders against a de-industrializing Wallonia.[57] Following the same logic, Walloons' stronger authoritarianism might be related to economic difficulties, rather than some specificity of Francophone culture, as would suggest the near identical positions of France, Wallonia, and French-speaking Suisse Romande along the authoritarianism axis.[58]

Switzerland is another country where it seems difficult to separate the impact of ethno-linguistic diversity from the effect of regional divisions. Like in the case of Austria and Belgium, regional differences in the values of the Swiss population are pronounced despite the country's small size. Similarities between the French-speaking cantons and France, the closeness of the Italian-speaking canton to Northern Italy might suggest cultural bonds that persist despite boundaries. In this respect, the German-speaking cantons constitute an exception because they are less similar to (West) Germany than is Switzerland on overall.

In the case of the United Kingdom,[59] the data confirm the stronger religiosity of the Scottish population, a characteristic that is often discussed as a component of Scottish cultural heritage (Bruce, Glendinning, and Rosie 2004). The Catholics of Northern Ireland are among

[56] E.g., the Vlaams Blok party (rebranded Vlaams Belang after 2000).

[57] See earlier Note on Inglehart's misreading of Flemish nationalism.

[58] In the case of France (not included in the country subdivisions diagram), no scores are available from the years around 1990 where the Belgian survey was conducted. However, France's location in 1981 and 1999 (shown in Figure 12) indicate little change along any of the two axes, which suggests that in 1990, it might have been similar to Wallonia. In 1999, its religiosity score is nevertheless equal to that observed for French-speaking Switzerland in 1996.

[59] Following Inglehart's reporting, the sample of Northern Ireland is analyzed separately from the rest of the British sample, hence the scores for "Britain" designate the weighted averages of England, Wales, and Scotland. Summary indicators for the United Kingdom are included in the analysis of the relationship between values and macroeconomic indicators.

the most religious of all the nations and subnational entities included in this comparison — but at the same time, they are about as libertarian as the English. The location of Northern Ireland (Catholics and Protestants combined) indicates that Northern Ireland's Protestant population is less religious but more authoritarian than the Catholics.[60] To appreciate the significance of this finding, it should be pointed out that these data come from 1990, when the armed conflict between the IRA and Britain was not yet over: what in media parlance used to be called "Irish" terrorism was alive and well. These scores demonstrate that the atrocities committed with the objective of seceding from the United Kingdom cannot stem from some typically Irish "cultural leaning": Northern Ireland's Catholics are not more, but *less* authoritarian than all the inhabitants of that province combined. What is more, these results again confirm the reductionism of Inglehart's secular-traditional instrument. Extrapolating the Huntingtonian argument positing a "clash of civilizations", a look at the location of Northern Ireland in the Inglehart-Baker map would suffice to link the atrocities committed in the name of the struggle for Irish self-determination to Northern Ireland's (as well as Ireland's) "surviving traditional values" and to point out an "Irish Catholic propensity toward violent conflict".[61] In reality, neither the Irish population (Figure 9), nor Northern Ireland's Catholics have traditional values in the authoritarian sense: they only "look" traditional through the prism of instruments conflating authoritarianism with religiosity. (It does not follow that the populations with authoritarian values endorse political violence.) In the case of Northern Ireland's Catholics, their stronger religiosity cannot be separated from the fact that Catholicism has been instrumental in the preservation of Irish collective identity.

[60] Although the scores for Northern Ireland's Protestant population are not structurally equivalent, therefore excluded from this diagram, this is a logical conclusion from the relative positions of the Catholics and Northern Ireland as a whole. Catholics and Protestants are the major subnational entities of Northern Ireland.

[61] This is a paraphrase of Huntington's postulate of a "Muslim propensity toward violent conflict" (1996: 258), backed up by contingency tables crossing the number of ethnopolitical conflicts and civilizations ("Islam" versus "others") not subjected to tests of statistical association and presented without controlling variables. Huntington's clash of civilizations thesis has been criticized regarding the relevance of the civilization clusters (Hunter 1998; Esposito 1999; Fuller 2002), the posited doctrinal uniformity of religious traditions (Esposito and Voll 1996), and the evolution of violent conflicts contradicting the thesis of clash (Gurr 2000; Henderson and Tucker 2001; Russett, O'Neal, and Cox 2000; Chiozza 2002; Henderson 2005; Neumayer and Plümper 2009).

Although the number of available subdivisions is lower, comparable polarizations are manifest also in Eastern Europe. They are most prominent within Serbia,[62] ranging from very secular, moderately authoritarian "Yugoslavs" to authoritarian and secular Serbs (themselves similar to Russians), and religious and very authoritarian Serbian Muslims, the majority of whom represent the province of Kosovo. The relevance of Yugoslav identity (a category that, many years into the armed conflict in post-Yugoslavia was still available among the options offered to respondents) is confirmed: this low degree of authoritarianism probably reflects the post-nationalist attitude evident in the labeling. However, it is difficult to isolate a consistent relationship between values and religious background (especially denomination), even within one single political entity. Within Bosnia, Muslims are more secular and also more authoritarian than Catholic Bosnian Croats whose position is closer to Croatia, itself highly religious (the latter not included in this diagram).[63] In the Former Yugoslav Republic of Macedonia, Muslims are more religious than the country overall, on pair with the US South, several South American countries and Nigeria. With regard to Ukraine, the relative positions of the Ukrainian and Russian ethnic groups do not seem to corroborate the ideological claim of Ukrainian nationalism that it represents a cultural outlook that is closer to Western Europe than Russia. Its Ukrainian majority is slightly more, rather than less authoritarian and more religious than its Russian minority.[64]

The regions of the United States[65] differ primarily in religiosity. The Southern and Midwest states have the most religious populations, while the West coast is the most secular,

[62] At the time of the 1996 survey, Serbia and Montenegro were the last remaining republics of Yugoslavia, dissolved in 2006. Their respective samples are of sufficient size to be representative of the two republics, therefore studied separately.

[63] The overall scores for Bosnia show higher degrees of both authoritarianism and religiosity than what follows from the respective locations of Bosnian Croats and Bosniaks (Muslims). This is because the national average is influenced by the values of Bosnian Serbs whose scores are not structurally equivalent, therefore do not appear in the diagram.

[64] Nonetheless, it would be hard to find evidence of the "cultural roots" of the interethnic conflicts that plague Ukraine at the time of writing. In 1996, when this survey was conducted, Ukraine was years ahead of the political turmoil that led to the recalibration of its relationships with Russia and the armed conflict between its main ethnic groups. Ukraine's scores from three years later (presented in Figure 12) show no evolution toward less authoritarianism.

[65] For regional subdivisions, refer to Table 19 for Canada, and to Table 20 for the United States (Appendix 2). In the case of the United States, the classification adopts the US Census Bureau's definition of

and also the least authoritarian. Interestingly, the North-Eastern states are no less authoritarian than the South, although the differences between the four regional scores are small. In North America, the religious-secular divide seems to reflect the degree of urbanization: in both the United States and Canada, the regions with the highest concentration of urban population — the North-East and the West Coast in the US; Ontario and Pacific Canada — are more secular than the less urbanized regions. (This is a more plausible interpretation than stressing the impact of coastal location: Canada's most religious geographical unit is the Atlantic Provinces, a sparsely populated, less industrialized region.) Although the two instruments for Quebec had to be excluded from this comparison, Canada's national score suggests that Quebeckers[66] are even more secular and more authoritarian than the rest of the country. These differences between the United States and Canada, at both the national and regional levels corroborate the findings of other researchers, highlighting a more-than-subtle cultural divide between the two nations.[67] Nevertheless, this general pattern involves important nuances, such as the cultural proximity between the Pacific United States and Canada overall.

Australians represent a transition between the British and North American profiles: secular like the Brits and libertarian like Canadians and the inhabitants of the Pacific United States. However, this reflects the values of the Anglo-Celtic majority: the values of Australians of European ancestry[68] are not far from the West European median: moderately religious and significantly more authoritarian than the United States, Canada, and Australia. Ancestry and ethnicity are related to different values in the case of Mexico and Peru, the two Latin American countries where subnational entities can be compared.[69] The scores indicate that Mexicans and Peruvians of Caucasian ancestry are less authoritarian but no less religious than their respective nations overall, although this narrow scope does not allow for conclusions.

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four statistical regions. (The sample size does not allow to go beyond this level.) These four regions have partly distinct historical trajectories, especially in the case of the former Confederate states in the South.

[66] In the Canadian survey, no information was available on the language of the respondents. The Quebec sample, which includes a minority of English-speaking Canadians, had to be excluded because its religiosity and authoritarianism scores are not equivalent with the structure at the cross-country ecological level.

[67] See for example Adams (2003) on the myth of converging American and Canadian values.

[68] Australians were classified according to respondents' self-reported ancestry since this constitutes a more significant component of Australian identity than geographical regions (Pakulski and Tranter 2000).

[69] In the case of Brazil, only the scores from the sample of Brazilians reporting Caucasian ancestry are comparable.

1.4.5. Evolution between two surveys

Maintaining structural equivalence as a necessary condition for comparison, the number of countries for which at least two surveys are available drops significantly, from 53 to 31 in Figure 12 (p. 59).[70] The reference for this comparison is Inglehart and Baker's map showing the evolution of their country scores in Figure 13 (p. 60).[71] To appreciate the country trajectories along the axes representing the religiosity and authoritarianism instruments proposed as alternatives to Inglehart's measures, let us go over his main argument concerning value change. From the proposition that "economic development seems to move societies in a common direction" (Inglehart and Baker 2000: 30), it follows that closest to "the cutting edge of cultural change" (ibid.: 31) — that is, highly secular and strong self-expression values — are the economically most developed nations. (An important proviso is the postulate of cultural exceptionalism exemplified by the United States, an oversimplification reviewed above.)

Let us start with the trajectories of ex-communist nations. In the dynamic IB map, a typical pattern is a shift to "more traditional" values — Slovenia being an exception. Inglehart and Baker attribute this evolution to the "collapse of their economic, social, and political systems" (ibid.: 41). Undoubtedly, the 1990s in the former communist states were a decade marked by crises, involving — to varying degrees depending on the national context — economic recession, unemployment, the collapse of established forms of governance, the rise of extremist movements, and in more than a few instances, also armed conflicts. From this perspective, the corresponding shift toward traditional forms of authority, a logical response to rising existential insecurity, makes sense. Figure 12, however, shows a more complex picture. Of the 10 formerly communist countries for which we have reliable measures, only Ukraine and Croatia had shifted toward more authoritarianism — and even in these cases, the increase had been minor. In eight countries, authoritarianism had *decreased*, and, with the exception of Russia, this change had been substantial.

[70] Four countries with large populations: India, Japan, Nigeria, Turkey are left out from this analysis.

[71] As with the previous comparisons, given the constraint of equivalence, the country scores are not necessarily from the same year as in Inglehart and Baker's study. For some countries, more than two surveys with comparable constructs are available. In such cases, the selection includes the earliest and the latest available scores.

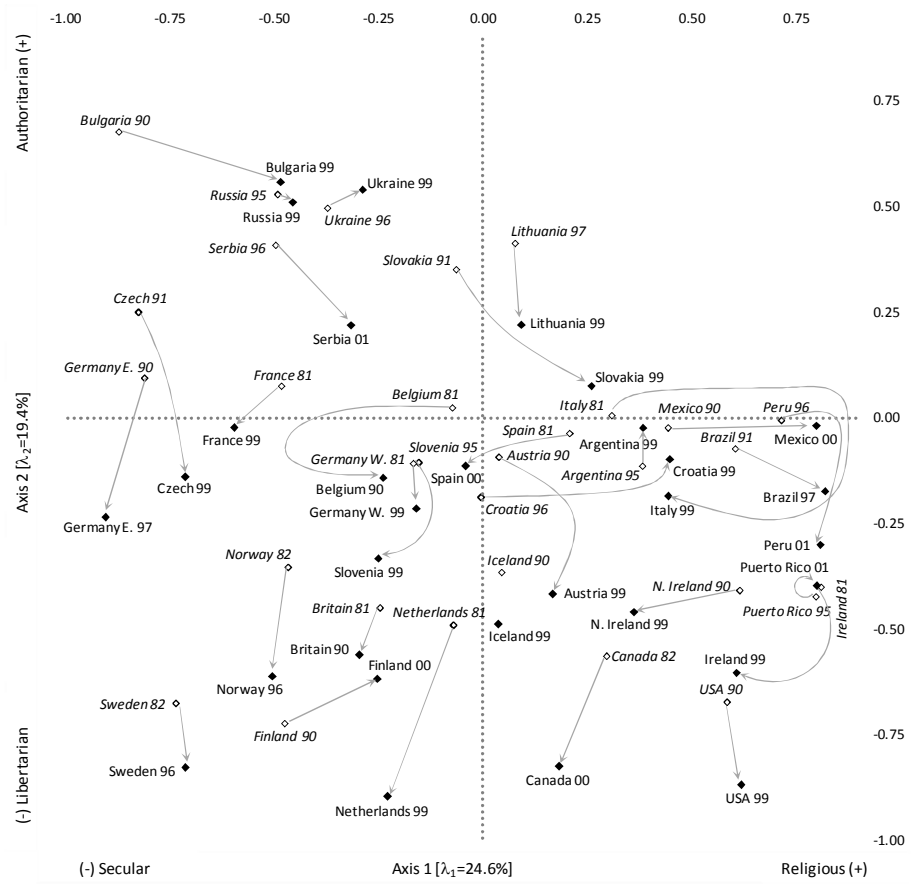

Figure 12 Change over time in location on the dimensions of religiosity and authoritarianism for 31 societies

Note: Correspondence analysis at the ecological level. Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries). Only countries with at least two sets of structurally equivalent constructs from separate surveys are shown. Refer to Figure 8 for the arrangement of the modalities and Table 17 (p. 147) for the country congruence coefficients.

The case of Serbia is especially significant, as this country had undergone, between the surveys whose results are reported, one of the worst emergencies of the post-communist transformation. In the wake of the disintegration of the former Yugoslavia, Serbia's nationalist leadership drove that country into a long series of local wars and had maintained its grip on power for more than a decade until it was overthrown in a popular revolt in 2000. Throughout the 1990s, the country had been in an almost constant state of war, the last stage of which, with the conflict in Kosovo, took place between the two surveys (1996 and 2001). Although the wars in Croatia and Bosnia were over, it was during this five-year period that the Serbian population, already weakened by economic and political sanctions, had suffered some of the most important shocks with the international bombing campaigns that destroyed an important part of its civil infrastructure. Nonetheless, Serbians had not moved toward more

authoritarianism. They had become more religious — an understandable development, given the strong religious emphases in ascending Serbian nationalism. The latter inevitably included a discriminatory component (Pešić 2000; Radić 2000), and at a minimum, created the conditions for an increase in popular authoritarianism. Yet, the overall picture in Serbia is progression toward the values of the West European median.

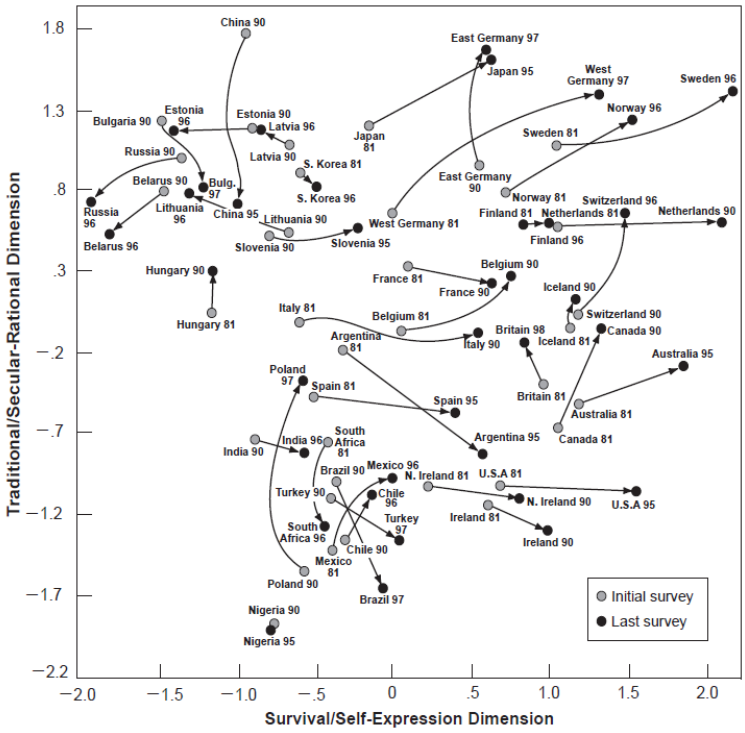

Figure 13 Change over time in location on the dimensions of secular-traditional and self-expression-survival values for 38 societies

Note: Reproduced from Inglehart and Baker 2000: 40, Figure 6. Data are from the World Values Survey, waves 2 and 3 (1990-1991 and 1995-1998).

Taking Inglehart's secular-traditional scale as yardstick, the decrease in authoritarianism among the Bulgarian, Czech, East German and Slovakian populations during the 1990s is no less surprising. Although free from armed conflict, these societies had not been spared the turbulence of democratic transition. The economic downturn had been especially severe in Bulgaria, and Slovakia had been governed by forces espousing a bigoted variant of nationalism (G. Evans and Whitefield 1998). Still, these four societies had become more

libertarian. Like in the case of Croatia, Serbia, and Ukraine, the increased religiosity of Bulgarians and Slovaks might be related to the reaffirmation of national identity or to the repression of religious life under communism. (A slight increase had occurred also in the Czech Republic.) In sum, *the value change in these post-communist societies that Inglehart and Baker describe as "a retrograde movement"* (ibid.: 41) — to the extent that "retrograde" implies a regression to parochial worldviews — *had not occurred in most of the post-communist nations for which comparable measures exist*. What they measure as an "increasing emphasis on traditional values" is, in reality, an increase in religiosity. This is also evident in the fact that in East Germany and Slovenia — as well as in other countries where neither religiosity, nor authoritarianism have increased —, Inglehart's secular-traditional measure does not indicate such reversions.

Outside transitional Eastern Europe, it is also difficult to identify a *general* movement toward secularization. Significant decreases in religiosity are restricted to France, Belgium, the Netherlands, Spain, Ireland, Northern Ireland, Spain, and Canada. Altogether, religiosity had declined between two surveys in 10 out of 31 countries, including the post-communist world. In Brazil and Mexico, the two most populous Latin American nations, it had increased substantially. In these two countries, existential insecurity might be part of the explanation: the 1990s were a decade of economic instability, marked by, in addition to rising inequality, social exclusion, and violence related to organized crime. The positive correlation found between religiosity and income inequality (Table 7, p. 44) suggests that the degree to which religious institutions are involved in the provision of welfare services can be inferred from the (un)availability of government or market options, and also the vulnerability of the population in absence of such options. However, religiosity had also increased in affluent societies such as Austria, Italy, and Finland.

Like religious revival in Eastern Europe, religious decline may also reflect the direction of political transition, especially in post-authoritarian or post-conflict contexts. In Spain, it is probably linked to the transition from the Franco regime under which the Catholic Church wielded considerable political influence. In the case of Ireland and Northern Ireland, where the findings show a decisive secularization trend between 1990 and 1999, it might be related to the winding down of the armed conflict in Northern Ireland, and the ensuing political settlement in view of which the religious component of national identity recedes progressively. These particularities aside, the general trend is progression toward less authoritarianism: *significant decreases in religiosity are exceptional, rather than the rule*.

1.5. Conclusion

The findings presented in this chapter confirm what many Inglehart critics have long suggested. Instead of stemming from sociologically more coherent definitions of religiosity, authoritarianism and materialism, Inglehart's measures are produced by their conflation which renders them unable to adequately account for such phenomena as non-authoritarian religiosity, secular authoritarianism or even actual materialism. The instruments adapted to the complexities of the individual level offer an opportunity to better grasp the content of these values. Overall, the MCA solution, based on the positioning of individuals relative to opposed value modalities yields conceptually clearer dimensions than do those obtained by their linear combinations (PCA) or latent variables imposed on the data (factor analysis). The switch in focus from a variable-centered logic to relations between subjects and properties has also shown remarkable stability of values across generations in two non-Western societies.

Given the ambitions of many cross-cultural researchers, the opportunities offered by the approach presented in this study are rather modest. This study has found very few cases from outside the Western/European context where value dimensions are comparable at all. On the other hand, the origins of configural disagreement offer insights that are no less valuable than the cases where such comparisons are warranted. Most importantly, given MCA's emphasis on subjects, value research stands to benefit from a reorientation toward the intracultural (within-country) level. A major limitation of MCA is that unlike in factor analysis, we still lack best practices to assess structural equivalence at the individual level.[72] At this stage, it is not clear what methods are available to test the summary indicators produced by MCA for *full equivalence*. This study has addressed equivalence at the construct level but leaves it to future research to assess whether the constructs identified in MCA can be found to achieve also metric and scalar agreement, a precondition for comparison of country means of instruments relevant at the individual level. However, as previous cross-cultural research has shown, comparable latent dimensions at the individual level are exceptional regardless of the method.

A sensible alternative to the impasse of incongruent latent structures at the individual level is ecological analysis with its less stringent equivalence criteria. The country locations using indicators exempt of the shortcomings related to measures produced by the conflation of values challenge the Inglehartian thesis of value change. The findings obtained with these alternative indicators call into question the core Inglehart thesis of *value change induced by*

[72] These issues are discussed in Blasius and Thiessen (2006a, 2006b), and Blasius and Graeff (2009).

economic growth — at least to the extent that rising national affluence does not systematically bring about shifts away from "traditional sources of authority". We have seen that such a thesis hinges on a restrictive definition of religiosity in which the coercive elements of institutionalized religion are paramount — not on religiosity proper. Had Inglehart adopted measures taking into account the semantic specificities of the value domains, he would have arrived at a similar conclusion.

At this stage, the invariance issues pertaining to the complex constructs presented in this thesis preclude any conclusion on how national affluence affects materialism — if by materialism we mean a value clearly demarcated from religiosity and authoritarianism. Furthermore, due to the incongruence of Inglehart's value constructs, we cannot tell whether the value change that *his* thesis posits is actually borne out by *his* indicators. These concerns aside, the evolution of country locations, as well as the location of subnational entities relative to national averages provide further support for the robustness of the religiosity and authoritarianism instruments. We can plausibly argue that in the societies that constitute the European civilization (for which we have reliable measures), religiosity does not "evolve" in the direction posited by Inglehart, and per capita GDP has a stronger association with authoritarianism than it has with religiosity. An important insight from these comparisons is that what in the Inglehart typology appears to constitute more or less coherent historical clusters are less manifest when making the warranted distinction between religiosity and authoritarianism. It is then difficult to decide whether the location of the societies along the two axes can be explained by some "independent" effect of religious heritage or other factors. Chapter 2 revisits these questions with a focus on the interconnections between values and economic growth.

2. Values and economic growth

For two decades following the first formulation of the postmaterialism thesis, Inglehart's studies have focused on economic growth as cause and values as outcomes. In the mid-1990s, this was followed by an inquiry into the opposite direction: culturally induced economic growth. While his interest in the "cultural determinants" of economic growth is manifest in a significantly smaller number of writings — and he appears to have abandoned this line of research — , the arguments presented in the two studies (Granato, Inglehart, and Leblang 1996a, 1996b) and deconstructed in this chapter constitute an important current in Inglehart's work and the research tradition it continues to inform.

The thesis of culturally induced economic growth was advanced in *Culture Shift in Advanced Industrial Society* (Inglehart 1990). In *Sacred and Secular*, co-written by Pippa Norris (Norris and Inglehart 2004), the relationship between religious tradition and work values is studied in connection with the endogenous growth model proposed in these studies. In *The Human Development Sequence* (Inglehart-Welzel 2005), the process of political emancipation in the developing world is linked with the deregulatory wave scaling back government intervention — policies whose theoretical references include the growth model Inglehart was seeking to update. It also reemerges in Welzel's update to the Inglehartian thesis of value change (2013). Another consideration in favor of deconstructing Inglehart's model of culturally induced growth is his theoretical perspective. The latter shows a closer engagement with sociology than does his work on postmaterialism, in which references from psychology and political science are paramount. Finally, it is this excursion into culturalist explanations of economic development that provides the impetus for much of the non-scholarly spinoffs from value research. Therefore, for social scientists engaging with substantialist accounts of economic development, the endogenous growth model updated with a cultural variable presented by Inglehart and his collaborators constitutes an important reference.

The first part of this chapter presents the explanatory models in two articles written by Granato, Inglehart and Leblang (henceforth: GIL) (1996a, 1996b). This discussion centers around the *endogeneity approach*, an umbrella term designating those currents in the social sciences which propose incorporating cultural variables into economic growth models.

The second part examines the role of entrepreneurship, as opposed to state intervention in the processes nudging national economies toward growth. Given that GIL ground their models in endogenous growth theory, this section engages with the related assumptions concerning the origins of innovation, in particular innovation in *basic* technologies. The discussion contrasts the neoclassical framework with the empirical accounts of heterodox perspectives.

The third part reports findings from regressions of economic growth and per capita GDP. These are discussed with reference to GIL's model presented in the first part. The models include religiosity and authoritarianism, the latent constructs identified in Chapter 1 and three value scales from Schwartz's ecological analysis (1994, 2006).

The theoretical rationale of GIL's articles being the *established* reading of Max Weber's Protestant ethic (PE) thesis, the discussion of the interconnections between religion and economic growth could be integrated into this chapter. However, the implications are more complicated than what follows from the often routine references (including Inglehart's) to this seminal text in sociology. Given that a thorough engagement with the PE thesis would take up disproportionate space in this chapter, it is integrated into Chapter 3 where it is discussed in connection with the critique of the substantialist perspective. This is in line with Weber's original PE argument, which demarcates itself from an idealist/culturalist interpretation. At this stage therefore, I merely note that the impetus behind the newfound interest in Weber's work among economists and many practitioners of value research can be traced back to the attempts at developing models of economic growth including a cultural variable.

2.1. The endogeneity approach

The debates on the interconnections between what the current terminology defines as "values" on the one hand, and "economic outcomes" on the other is among the most enduring in the social sciences. As GIL recognize, the renewal of the empirical interest in these issues stems from a criticism of neoclassical models of growth (Solow 1956; Swan 1956). The limitations of these models relate to their treatment of the production function as dependent on a number of *exogenous* variables like savings, population growth and shifts in technology. Yet, under the assumption of rationally motivated actors, the inclusion of a variable capturing technological innovation in growth models is problematic because "the compensation of nonrival old ideas in accordance with their current marginal cost of production-zero-will not

provide the appropriate reward for the research effort that underlies the creation of new ideas" (Barro 1996: 6). However, in the absence of technological innovation, per capita growth will slow down or eventually halt. As a result, the exogenous growth model shows an unchanging standard of living (GIL 1996b). It also postulates diminishing returns to reproducible capital (Barro and Sala-i-Martin 1990; Barro 1991) — that is, economies with lower initial per capita GDP levels will grow faster than those with higher initial levels. The latter relationship is confirmed in regression models — with the implication that over the long run, per capita GDP will converge. This has not been the case: the gap between the economically most developed and the poorest countries has not disappeared.

In contrast, *endogenous* growth models do not assume decreasing returns to scale. They focus on the productivity of the population and include a proxy for various contributing factors like research and development (Romer 1986, 1990; Grossman and Helpman 1991; Aghion and Howitt 1992), education and know-how (Arrow 1962; Uzawa 1965), political institutions (North 1990; Helliwell 1994; Leblang 1996; Acemoğlu, Johnson, and Robinson 2001). There have been efforts to study some of these variables (especially know-how) as primarily *individual* rather than contextual attributes under the label of "human capital" (Schultz 1963; Becker 1964; Becker, Murphy, and Tamura 1990; Mankiw, Romer, and Weil 1992) — a consideration that reconciles these adjustments with rational choice theories. These models all imply some kind of "cultural input" that is assumed to have an impact on *productivity* and thus to contribute to economic growth. While the exact content of this cultural variable is debated, the literature identifies it as a *value component*.

Building on these insights, McClelland (1967) had argued that differences in individual economic performance are the outcome of cultural differences in the emphases on achievement values. Various other values associated with individual achievement or lack thereof have also been proposed as positively or negatively impacting growth: "amoral familism" (Banfield 1958); "withdrawal of status respect" (Hagen 1963); "modern values" in a generic sense (Lerner 1958) and in connection with a subset of specific values (Inkeles and Smith 1974); non-conformity and creativity (GIL 1996a, 1996b); "generalized social trust" (Putnam 1993); "postmaterialist" values (with a *negative* impact), as opposed to "materialist" values (Inglehart 1997); "pro-" and "anti-business" (Lipset 2000), and "entrepreneurial values" (Porter 2000). Referring to Lucas (1988) who has identified culture as key to growth performance, GIL's study of these issues makes it clear the authors intend to "pick up" the discussion on endogenous growth models. Specifically, their concern is "why certain

countries grew at markedly different rates even though they may have similar endowments in population, working age population, urban residence, education levels, proportion of GDP in agriculture and manufacturing, and proportion of primary commodities in merchandise exports" (GIL 1996b: 387). They propose that, all other things equal, it is cultural values that make the difference: values impact growth via thrift and achievement motivation. Like the endogenous model proposed to augment, GIL's handling of this additional cultural variable remains embedded in neoclassical growth theory under the assumption that "individuals maximize a standard utility function" (ibid: 689).

Model Variable	Model 1	Model 2	Model 3	Model 4
Constant	-.70	7.29*	3.16	2.40*
	(1.08)	(1.49)	(1.94)	(.77)
Per Capita GDP in 1960	-.63*		-.42*	-.43*
	(.14)		(.14)	(.10)
Primary Education in 1960	2.69*		2.19*	2.09*
	(1.22)		(1.06)	(.96)
Secondary Education in 1960	3.27*		1.21	
	(1.01)		(1.08)	
Investment	8.69*		3.09	
	(4.90)		(4.40)	
Achievement Motivation		2.07*	1.44*	1.88*
		(.37)	(.48)	(.35)
Postmaterialism		-2.24*	-1.07	
		(.77)	(1.03)	
R^2 Adjusted	.55	.59	.69	.70
SEE	.86	.83	.72	.71
LM ($\chi^2(1)$)	.42	.65	.68	.87
Jarque-Bera ($\chi^2(2)$)	.05	.30	.18	.57
White ($\chi^2(1)$)	.28	.24	.37	.18
SC	.119	-.117	-.095	-.352

Table 9 OLS estimation of mean rate of per capita economic growth (1960-89) by Granato, Inglehart, and Leblang

Note: Reproduced from Granato, Inglehart, and Leblang (1996a: 617).
Dependent variable is mean rate of per capita economic growth, 1960-89. Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the indicators.
N is 25 for all models. Unstandardized regression coefficients; standard errors in parentheses.
* $p < .05$.

To provide empirical support for their proposition, GIL present a series of regressions using variables identified by Levine and Renelt (1992) "as having robust partial correlations"

(1996a: 616) with output growth. The independent variable capturing the relevant aspect of culture is the Achievement Motivation (AM) Index. This is constructed on the basis of responses to four questions, each of them related to goals that survey respondents might or might not consider important for children to learn: "thrift, saving money and things", "determination", "obedience", and "religious faith". The index sums up the percentage of respondents choosing the first two goals minus the percentage favoring the last two goals (ibid.: 611). GIL justify the inclusion of the AM Index in their growth models arguing that a nation's rate of domestic investment heavily impacts growth over the long run, adding the "weberesque" claim that since "investment depends on savings […] a society that emphasizes thrift, produces savings, which lead to investment, and later to economic growth" (ibid.: 613). Notice that this reasoning glosses over fundamental differences between household, government and corporate savings and investments. In essence, it argues that an individual's motivation to save has a sizeable positive impact on investment in the kind of activities, including technological innovation that sustain output growth. Although it could be argued that household savings are a good proxy for institutional investment, GIL do not provide empirical evidence for such a linkage.

The results of GIL's regressions are presented in Table 9 (p. 67).[73] The four models indicate that initial levels of per capita GDP correlate negatively with growth rates. Poorer countries therefore grow faster than do richer ones — a confirmation of the hypothesis of conditional convergence implied in the Solow/Swan model. Investment in physical and human capital has a positive effect in Model 1 but not in Model 3 where the cultural variables are added. The variable proposed to augment the endogenous growth model, achievement motivation has significant effect in all three models where it is included. Another value, *postmaterialism* has a negative effect in one model, but this effect disappears once controlling for the other variables in the baseline model. A retained significant effect of the Postmaterialism Index would mean that the value that Inglehart's earlier theses present as capturing the seminal cultural shift in the area of rising affluence and "postmodernization" is "a Protestant Ethic in reverse" (GIL 1996a: 613) — or a drag on growth.[74] Noting that when achievement motivation is added to the model, the significant effect of investment disappears, GIL propose that this is because (a) achievement motivation "encourages relatively high rates

[73] Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141.

[74] See the criticism of the Postmaterialism Index, reviewed in Chapter 1.

of investment", and (2) "the direct path from culture reflects the effects of motivational factors on entrepreneurship and effort" (ibid.: 620).

GIL formulate their arguments as part of an exchange with Swank (1996) and Jackman and Miller (1996a, 1996b) who are critical of their update to endogenous growth theory. Specifically, Swank argues that corporatist state policies, that is, top-down (as opposed to bottom-up) processes have played a key role in sustaining post-World War II economic growth. Jackman and Miller question the adequacy of values as independent variables that *postdate* the period from which average growth rates are used as dependent variable. They present regressions using a defensible chronological ordering relative to the dependent variable, which show "weak to nonexistent […] relationship between culture and economic growth rates" (1996a: 651). They also point out GIL's selection bias manifest in confining the analysis to mostly democratic and economically developed countries. Another criticism concerns construct equivalence: as with the value constructs discussed in Chapter 1, GIL do not provide evidence that the four items constituting their Achievement Motivation Index tap a comparable latent structure across the countries included in their analysis. Jackman and Miller (1996b) present factor analyses showing that the four items used to construct their Achievement Motivation Index do not arrange in semantically homogenous dimensions in all the 25 countries surveyed. This means that GIL's value instrument in the model *does not measure the same thing* across all countries, therefore its inclusion as an independent variable cannot account for how variations in a specific element of culture impact output growth. Finally, Swank, Jackman, and Miller criticize the reductionist definition of culture and the linear representation of "what theoretically is a multifaceted, complex relationship" (Swank 1996: 665).

GIL's arguments have continued to fuel the debates on the interconnections between values and economic growth. Studies relying on the Lucas/Romer augmented endogenous model have found significant effects for the cultural variable (e.g., Petrakis and Kostis 2013), while others have pointed out that GIL's results are contingent on a definition of culture that is not stable because stemming from an underspecified model (Edwards and Patterson 2009). McClelland's related thesis that the emphasis on achievement and other values linked with "market rationality", entrepreneurship, individualism, and "work ethic", as transmitted through socialization explains economic growth has been both endorsed (Marini 2004; Allen et al. 2007; Park and Voigt 2008; Minkov and Blagoev 2009; Gorodnichenko and Roland 2010; Forson, Janrattanagul, and Carsamer 2013; Maridal 2013; Zelekha, Avnimelech, and

Sharabi 2013) and questioned (Pryor 2005; Beugelsdijk and Smeets 2008; Hanson 2009) on empirical grounds. Causal linkages between social capital and economic performance have been supported (Whiteley 2000; Dasgupta et al. 2009; Rutten and Gelissen 2010) and also rejected (Foley and Edwards 1999; Schneider, Plümper, and Baumann 2000; Beugelsdijk 2005; Freitag 2006). Some authors (e.g., Westlund and Adam 2010) have suggested that social capital explains economic performance at the firm level but not at the level of large spatial units.

2.2. Entrepreneurship versus the state nexus

2.2.1. Technological innovation

In this section I turn to a subclass of culture, captured in the broad term "innovation" that mainstream economics regards as a decisive factor of economic growth. We have located the impetus for endogenizing technological innovation in growth models, like the related attempts with reference to a cultural variable in the effort to improve on the predictive power of the Solow/Swan model. GIL identify two mechanisms by which culture impacts economic growth: via an indirect path by *encouraging* "relatively high rates of investment", and a direct path that "reflects the effect of motivational factors on entrepreneurship and effort" (GIL 1996a: 620). The following definition (literally a text-book example) sums up the neoclassical roots of this approach:

> "There are three types of agents in this [endogenous] model. First, producers of final output hire labor and intermediate inputs and combine them to produce final output, which is sold at unit price. Second, R&D firms *devote resources* to invent new products. Once a product has been invented, the innovating R&D firm obtains a perpetual patent, which allows the firm to sell the good at whatever price it chooses. This price is chosen to maximize profits. Third, households maximize utility, subject to the usual budget constraint." (Barro and Sala-i-Martin 2004: 285, emphasis added)

This formulation makes it clear that the proposed improvement on the Solow/Swan model maintains the standard assumptions of neoclassical economics. Technological change occurs because firms seek competitive advantage over one another. The profit from

inventions that turn out to be marketable (that is, respond to consumer demand) are of sufficient scale to provide continued push for R&D, hence technological change. The end result is the perpetual rearrangement of the market around product innovations that rational consumers adopt in order to maximize utility. Utility maximization means always striving for more, and marketable innovations are a means to achieve that. Overall, assuming a market economy, the trigger of the market processes leading to innovation is the consumer — as in neoclassical theory. The "creative destruction" drive of the individualistic entrepreneur (Schumpeter 1934) merely responds to the impulse received from the consumer. It is in this theoretical framework that GIL propose to insert a cultural variable. This is expressed in the following formula (reproduced from Equation [1] in GIL 1996a):

$$Y_i = \beta I_{i,0} + \prod X_i + \varepsilon_i \qquad [1]$$

> "where Y_i is output growth (per capita) for country i, $I_{i,0}$ is a set of economic variables [initial levels of wealth and investment in human capital] measured at the beginning of the time period for country i. […] X_i is a set of 'other variables' including a constant, physical capital investment rates […], and *whatever other variables* the investigator is interested in exploring." (ibid.: 615, emphasis added)

GIL suggest that the X variables include cultural values. The first issue with this model is one of specification. To make their model fully compliant with the neoclassical framework, GIL assume that "individuals prefer more consumption to less" (GIL 1996b: 689) — a proposition which seems to have been lost on Inglehart critics. Although this assumption constitutes a pillar of neoclassical economics, its adoption by Inglehart is by no means evident. After all, his postmaterialism thesis posits that as societies enter the era of affluence, materialist impulses subside. If individuals indeed behave as posited by neoclassical growth theory, then the postmaterialism thesis becomes impossible to defend. The postulate of whatever threshold beyond which individual preferences switch in favor of less consumption is incompatible with the endogenous growth model.

The second, more important critique concerns the less articulated, but nevertheless significant implication of neoclassical growth theory. In the various formulations based on Lucas's growth model — including the above quote from Barro and Sala-i-Martin, as well as GIL's proposition —, "new ideas are treated as endogenous *to the firm*, not as part of the

institutional organization required to transform ideas into products" (Mazzucato 2013: 50, emphasis added). Heterodox empirical accounts refute this view and identify the state as the single most important actor in the allocation of resources conducive to economic growth and stress the role of military expenditures as a major source of technological innovation.

The suggestion that technological R&D and, by implication, economic growth are dependent on the state already appeared in the 1950s and 1960s, notably in the writings of Galbraith (1984) and Mills (2000). By describing the state not as a mere anti-cyclical interventionist which, in times of crises, steps in to prop up consumer demand in order to avert a depression, these authors go well beyond Keynesian theory. The first detailed account of the role of military procurement in sustaining an ever increasing portion of the civilian economy following World War II was given by Baran and Sweezy in their essay *Monopoly Capital* (1968). As the private sector has neither the resources (funds, and especially time), nor the strategic thinking required for the kind of innovation that is conducive to technological breakthroughs, state-driven innovation in basic technologies is the rule rather than the exception. Some forty years later, Ruttan's monograph on the mechanisms of military-induced R&D technological innovation (2006) showed that following the early 19th century (that is, since the beginning of the industrial revolution), all innovations in *basic* technologies had been state-funded and military-related.[75]

Against the assumption that technological innovation is the outcome of the spontaneous actions of creative individuals and firms which, driven by the profit motive, merely respond to consumer demand by churning out products that enhance others' and their own well-being,

[75] Ruttan (ibid.) identifies six such stages of technological breakthrough. (1) The invention of interchangeable parts was the result of the military's increased need for hand weapons (rifles) during the territorial expansion of the United States in the early 19th century. This pushed the industrial sector from the handicraft paradigm to standardized mass-production, and laid the bases for the industries that emerged during that century from railroad construction to the automotive industry. (2) The technologies creating the basis for commercially viable civil aviation were brought about thanks to the arms race during and in the wake of the two world wars. Specifically, jet propulsion technology, which made possible cheaper and long-distance air travel, was developed by the military of the major belligerent powers during World War II. (3) Nuclear technologies would not have been developed were it not for the strategy of mutual military deterrence during the Cold War era. (4) The creation and expansion of the computer industry following World War II were also driven by the increasingly sophisticated requirements of the arms race. (5) The R&D programs that gave birth to the internet were financed with the purpose of providing the military with a decentralized communication system capable of functioning even after a nuclear attack has destroyed larger sections in the network. (6) Finally, the space industries integrate all of the above technologies in one giant R&D economy.

Baran, Sweezy, and Ruttan have shown that the type of technological innovation that nudges the economy toward increased production is a state-driven, therefore top-down process. Moreover, the technologies on which commercially viable applications are based are, in their initial stages, often developed for quite different purposes with no civilian use in sight. Ruttan uses the concept of *spinoff* to describe the various processes which, through a long period of gestation, and as an unintended consequence, result in the commercial adoption of technologies originating in military procurement. Most importantly, Ruttan's monograph presents evidence that without state-funded military R&D, the technologies that, over the 200 years following 1800 have been instrumental in revolutionizing production either would not have been invented or would have appeared at much later stages.

The thesis of state-funded technological innovation includes two important qualifications. First, while the private sector does allocate resources to R&D, this is not the kind of activity that results in the paradigm shifts leading to innovation in *basic* technologies. Corporate funded R&D focuses on combining *already invented* basic technologies into new product formats and marketing — the latter in the broadest sense, including not only branding, but also public relations efforts and lobbying for legal innovations in line with corporate strategy.[76] Second, the fact that private firms participate in the development of basic technologies does not invalidate the thesis of state-funded innovation. From the aviation industry to the pharmaceutical sector, corporate participation in basic technology R&D is a reality, but the funding comes primarily from taxpayer money. Obviously, while internet-based commercial applications are the result of processes that qualify as R&D, the paradigm shift in computer technologies making them possible was the invention of the internet, which gave rise to a myriad of specific applications. None of the latter was available until the early defects of internet technology had been overcome — in the meantime, related applications were still restricted to the military and state-funded research laboratories. Ground-breaking new technologies require decade-long testing and improvement before they become

[76] Parallel to the advances in automation and the related outsourcing of physical production to low-wage countries, branding, that is the "creation of meaning" becomes part of the production process. With the transition from what neoclassical terminology calls "search goods" to "experience goods" (Nelson 1970), and the resulting shift in marketing focus from use value to symbols, branding no more merely sells but increasingly also creates the product (Galbraith 2007; Klein 2000; Bourdieu 2005; Hesmondhalgh 2012). The giant budgets spent on marketing are rightly considered as part of corporate "research" and "development" because they indeed constitute innovations. But their products are related to, in Galbraith's word "want synthetization" and sales, not the activities whose outputs result in technological paradigm shifts.

commercially applicable. Exposed to the pressure of profit expectations over a much shorter time horizon, the private sector cannot provide the funds necessary for the kind of R&D activity that produces those technologies. As a result, the technology hubs discussed as showcases of "entrepreneurial capitalism" would not exist were it not for government-funded R&D. For example, Silicon Valley has been, since its mid-20th century inception, heavily dependent on the military-industrial complex, a sophisticated network of state-funded cooperation between government, academia and private enterprise that owes its existence to the defense considerations originating in World War II, and especially the Cold War (Cumings 2010).[77] Market mechanisms are part of the picture — but not until the phase of spinoff where the already invented new technologies mature to commercial viability.

Government intervention and protectionist state policies, rather than "Confucian work ethic" have been found instrumental also in inducing the rapid growth of East Asian economies. Wade (1990) has argued that Taiwan's late 20th century boom had been the outcome of heavy regulation of and direct government intervention in the corporate sector in the form of incentives for investment in new industries and public firms funded by taxpayer money engaged in technological innovation. The same diagnosis has been proposed by Chang with regard to South Korea (1993) and Japan (2008a), and research into the developmental state has evolved into a field in its own right (P. B. Evans 1995; Woo-Cumings 1999; Chang and Evans 2005; Reinert 2007; Chang 2008b).

Expanding on these works, Mazzucato's survey (2013) of the commercially most successful recent applications in information technology and the pharmaceutical industry found that the R&D activity sustaining them was no less dependent on public funding than the technologies discussed in Ruttan. The rapid expansion of the pharmaceutical industry shows how the biotechnology sector has adopted the military-industrial template. The bulk of pharmaceutical R&D funds are secured via government agencies (e.g., the National Institute

[77] The Apple product line is a case in point, discussed at length in Mazzucato (2013). While from the press to academia, Apple is usually praised as an icon of entrepreneurial innovation, every technology built in its products was developed using public funds, including not only seminal hardware and software applications but also more recent, smaller scale innovations like touch-screen technology, developed using the US federal government's Small Business Innovation Research (SBIR) funds. In addition, Apple was heavily reliant on government support (including direct equity investment) in the early stages of its existence, and continues to rely on "tax, trade or technology policies that supported US companies such as Apple that allowed them to sustain their innovation efforts during times when national and/or global challenges hindered US companies from staying ahead, or caused them to fall behind in the race for capturing world markets" (ibid.: 124).

of Health in the United States), not corporate reserves. In turn, pharmaceutical corporations spend heavily on securing monopoly positions via patent rights (Baker 2007; Angell 2005; Gambardella 1995). Crucially, the emergence of the US biotechnology industry is the outcome of a powerful lobbying effort crowned by the Bayh-Dole Act of 1980, which allowed the patenting of products obtained from publicly funded R&D.

Endogenous growth theory, including its Inglehartian adaptation to accommodate "achievement values" suggests that in order for a knowledge-economy to develop, investment in creative work should be compensated by granting monopoly rights. It follows from the postulate of market equilibrium that those investing in such activities should earn a premium proportionate to the market value of their efforts. However, the existing patent regime precludes the risk-takers, the public, from the reward of their investment in basic technologies — hence a contradiction with the endogenous growth model. Elaborating on the related formulas, Barro and Sala-i-Martin propose that "once a good has been invented, the institutional setup will *allow* the inventor to collect the present value" (2004: 292, emphasis added) of that invention:

> "A researcher will find R&D investment attractive if this present value[78] is at least as large as the R&D cost." (ibid.: 293) "The intermediate good that is about to be discovered generates a present value of monopoly profits that just covers the R&D cost […]" (ibid.: 294).

If Barro and Sala-i-Martin's formulation captured the existing innovation regime, we would find that little or close to no R&D investment takes place. Their formula suggests that the state will decide *against* investing in R&D because it is aware that it will not receive the "monopoly profits that just covers the R&D cost". Against this hypothesis, the reality is large-scale public investment in R&D whose profits accrue not to the investor (the "risk taker") but to the firms whose R&D-related monopoly and other profits are secured thanks to an institutional setup channeling public money to private ends. Put differently: if the endogenous growth model withstood empirical testing, public investment in drug R&D would lead to low(er) drug prices and significantly less exclusive marketing rights. In the case of justifiable restrictions on production, it would mean quicker and smoother transition from patent protection to generic (that is, freely reproducible) drug status. Against this assumption and

[78] That is, the present value from the sales associated by the invention, *collected by the investor*.

owing to the pharmaceutical sector's lobbying power in shaping legislation, the price level in the drug market is kept at significantly higher levels than what would follow if investment in medical R&D was actually compensated in line with the above model (Drahos and Braithwaite 2004).

These properties of the existing patent regulation are related to a general consideration underpinning the copyright regime. Without willful copyright violations, the American economy could not have sustained its 19th century expansion. For the first hundred years of the American Republic, these violations had been endemic because tolerated, and even supported by the state. Studies by heterodox economists (Reinert 2007, Chang 1993) have found that at the early stages of modernization, the corporate-controlled intellectual property rights regime is prohibitive. The economic history of copyright corroborates this: against the assumptions of neoclassical growth theory, the American economy had modernized not in spite of but partly thanks to large-scale cultural piracy (Lessig 2004). The non-recognition of foreign authors' rights during the industrial revolution on the one hand, and the dominant copyright regime on the other point to the same underlying rationale: creative work and innovation takes place primarily outside the scope of the "free" market. Compensating for investment in creative work "at a market price" is not a necessary condition for technological innovation and, by implication, economic growth.[79]

2.2.2. Take-off stage

The empirical accounts of state-driven economic growth follow a long tradition of heterodox economic thinking. Regarding early capital accumulation, List (1885) and Hobsbawm (2001) have argued that bourgeois entrepreneurship and risk-taking were not crucial in the industrialization of 19th century Britain, where investment was protected from competition as a result of Britain's grip on her colonial empire. Polanyi (2001) and later Wallerstein (1975) have proposed that the modern capitalism could not have emerged without colonial expansion, which was instrumental in providing access to cheap resources. Slavery, in particular, had been a catalyst of economic growth of major Western powers from the late 17th through the second half of the 19th century. British, French, Spanish and Portuguese

[79] Summing up the substantial government intervention in the US economy, Block (2008) has argued that despite the wealth of available evidence, the "developmental state" remains concealed from the public because the two major political blocks are uniform in their support for this state of affairs, and articulate their conflicts over issues that separate them.

colonial expansion depended on, and these nations' domestic economies grew in conjunction with slave labor, facilitated thanks to a deregulated global trade in slaves (Adelman 2006). More recently, historian Gerald Horne (2014) has argued that in the case of Britain's American colonies, the economy's dependence on slave labor was such that it initiated the revolt of 1776. The founding of the American Republic as an independent state was motivated, in large part by the US merchant class's irritation with what they regarded as British attempts at regulating and abolishing slave trade. The US settler elite realized that there was more to gain from ending religious conflict imported from Europe, and uniting the white merchant elite behind the consolidation of the slave economy.

These historians propose that the economic boom based on the global trade in the most sought after commodities of the 18th and 19th centuries was brought about not by entrepreneurial ingenuity but a system of production built on slavery. Before the Industrial Revolution, this system relied on sugar; later, the Industrial Revolution gave an impetus to cotton trade, and the epicenter of factory production in the Western world became the textile industry (Grandin 2014). The emergence of cotton as the most important commodity of global trade in the first half of the 19th century testifies to the endurance of institutionalized slavery: rather than a relic from the pre-industrial past, it became, if anything, more important to all rapidly industrializing economies (Baptist 2014).

The linkages between slavery and capitalist transformation do not fit the established understanding in abstract economic theorizing. While neoclassical currents typically do not discuss the issue, slavery does get attention in institutional economics. An influential analysis is presented by Acemoğlu, Johnson, and Robinson (2001) who explain colonialism's enduring negative impact on the economies of the former colonies by differences in "white settler mortality". In regions (loosely corresponding to the tropics) where they encountered a climate that they had difficulties adapting to, white settlers established fewer settlements and were present in much smaller numbers than in temperate climates where they did not have to face such hardships. Being fewer in number under the tropics, and finding manual work unbearable, they employed slave labor to extract natural resources. Lower absolute number and density of white settlers, as well as reliance on forced labor meant that they failed to import the "inclusive institutions" of Western culture. The result was that countries in the tropics were left with a legacy of "labor-repressive" institutions, which explains much of their later failure to modernize.

This variant of institutional analysis is perfectly compatible with neoclassical growth theory in that the basic formula of growth remains intact: market forces, when unhindered thanks to inclusive institutions will drive an economy toward innovation and hence expansion. Acemoğlu and his coauthors treat slavery as a merely incidental, "climatically" *imposed* (or at least *necessitated*) arrangement, not as an inherent feature of early capitalist development. By any standards, Southern Brazil, Argentina, the Southern United States hardly classify as "tropics" where white settlers had to have recourse to "non-inclusive" labor practices — yet, these countries were powerhouses of slave labor, fully integrated into the global economy. Speaking of Western colonial powers in a global context, the "inclusivity" of their political institutions is a myth: it is impossible to separate their domestic political and economic arrangements from the repressive institutions put in place in the colonies. As these powers were making the transition between two paradigms of power concentration: feudal on the on hand, and corporate capitalist on the other, slavery was a natural development, triggered by fast-paced industrialization in the absence of countervailing power.[80]

2.3. Values as independent variables in models of macroeconomic outcomes

The analysis presented in this section engages with GIL's models of culturally induced growth. The model specification is informed by the insights from the heterodox accounts and the criticism of GIL's models reviewed in the previous section. The regressions of economic growth and per capita GDP use the same structural variables as in GIL's analysis plus a number of factors related to historical context and cultural values. The Achievement Motivation Index and the measure of postmaterialism have been replaced by measures of cultural values that satisfy configural equivalence at the country level. This does not mean that the latter indicators measure entirely different things: Inglehart's measure of achievement motivation is related to the importance of individual autonomy, an orientation captured by the authoritarianism score.

[80] The profound affinity between colonialism and early capitalist development explains the ambiguity in Marx's own approach to the issue. On the one hand, he condemned colonialism as immoral, an extreme form of repression, that was nevertheless a necessary condition for capitalist transition. On the other hand, he identified in it a progressive element, related to the transfer of "civilization", and also a necessary stage on the road toward capitalism's autodestruction (Merle 2003).

Since in the case of the religiosity and authoritarianism constructs presented in Chapter 1, configural equivalence is not achieved for the majority of countries outside Europe, the models using these as independent variables are unavoidably Eurocentric. While this is an inconvenience, it is not exceptional: most of the 25 countries included in GIL's models belong in the Western world. In contrast, these alternative models use data from 45 countries. Nonetheless, to compensate for this limitation, I also discuss models using the three value constructs based on the Schwartz Value Survey (SVS, presented in Chapter 1), whose equivalence is verified at the country level (Schwartz 1994, 2006).[81] This gives a total of four analyses: two sets, respectively, for economic growth and per capita GDP as dependent variables. The regressions using the religiosity and authoritarianism scores (45 countries) are referred to as *Partial*, those with Schwartz's values (66 and 65 countries) as *Expanded Sets*. Each set includes six models.

[81] An extension of this analysis would include cross-country regressions of *individual* values on a number of country-level and individual variables. Coefficients for per capita GDP as an independent variable would be informative of the impact of country differences in total output on individual values. A requirement for these multilevel models is metric equivalence of the latent constructs (that is, invariant *units* of measurement at the *individual* level). With regard to authoritarianism and religiosity, this is achieved for significantly fewer countries than in the case of structural equivalence at the country level. (Results of these tests are not included in this study.) In the case of the Schwartz value constructs, a seven-instrument variant of the ESS values scale (using a 21-item battery administered by the European Social Survey) has been found to achieve metric invariance in 20 countries (Davidov, Schmidt, and Schwartz 2008). Therefore, the ESS values scale can be used in cross-country multilevel models where — the individual observations being nested in countries — *scalar* equivalence at the individual level is not a requirement. However, given the purpose of this study, this low number is prohibitive; therefore cross-country regressions of values at the individual level are excluded from this study.

2.3.1. Growth

Table 10 (Partial Set, p. 82) and Table 11 (Expanded Set, p. 83) present results from regressions of economic growth using these two sets of value constructs as independent variables. The dependent variable is the mean rate of per capita GDP growth between 1996 and 2013. The choice of this 18-year period stems from the constraints related to time-series: most of the value scores in both analyses (using the World Values Survey and the Schwartz Values Survey) come from surveys conducted, for the most part, during the 1990s. A rule of thumb is that the independent variables (including the value instruments) *should not postdate* the dependent variable — in this case output growth and per capita GDP. In the case of GIL's analysis, this is bypassed, since their value scores (both the Postmaterialism and the Achievement Motivation Indices) come from the early 1990s wave of the WVS, whereas their dependent variable is mean per capita GDP growth between 1960 and 89. On the other hand, as short-term fluctuations in the rates of economic growth preclude meaningful comparisons, the strategy to consider long periods is understandable.

Keeping to the above rule, the period considered for this analysis is shorter than it is in the case of GIL's study (18 years, as opposed to 30). An alternative solution would be to adjust the timeframe according to the exact survey year for each country: this would extend the reference period for output growth in the case of countries with the earliest available and comparable scores. Given that for religiosity and authoritarianism, the earliest measures come from the early 1980s, this would mean using thirty-year averages for some countries. However, doing so would mean that one would compare mean rates of growth that correspond to different stages of the global economy. In this study, there is no theoretical rationale for comparing the growth rate of Britain between 1981 and 2013 with that of Russia between 1995 and 2013. This calls for a standard timeframe with regard to the dependent variable.[82] The year of 1996 is chosen as the most sensible compromise: most of the country

[82] In many respects, the selection of the end year is a no less difficult task. A timeframe running through 2013 will result in different growth rates for the countries most affected by the late 2000s global financial crisis than what would be obtained using a shorter period — for example, with 2008 as the last year. However, this is not necessarily a concern: if countries differ with regard to the repercussions of crises on their respective economies, then it is reasonable that the dependent variable capture these differences. After all, the different exposure of national economies to such crises is part of their performance. On the other hand, one could argue that in the case of post-communist countries, the collapse of their national economies during the early 1990s will make it difficult to draw sensible conclusions on the way various independent variables impact growth rates

scores from the WVS are from surveys conducted between 1990 and 1996; Schwartz's scores are from surveys conducted in the mid-1990s. For the Partial Set, no value score anterior to 1990 was considered,[83] whereas for the few countries whose value scores are from later years, the maximum time-lag is seven years. This means that even in these cases, the greater part of the period considered for the dependent variable was ahead of the survey.[84]

As in GIL's study, the independent variables in the reference model include per capita GDP at the beginning of the period, enrollment in primary and secondary education, and the ratio of private plus public domestic investment. A fifth variable measuring income inequality is also added to this model.[85] The second model includes only values, to which the third model adds historical factors. Subsequent models differ in the combination of independent variables for which significant effects have been found. This discussion compares the relevant models from the Partial and the Expanded Sets.[86]

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across all countries. This is a more justifiable concern: as opposed to the late 2000s global crisis, the collapse of communism was a "less universal" phenomenon. It is partly for this reason that growth rates prior to 1996 are excluded from the dependent variable. Nonetheless, it is impossible to settle on a period in which the dependent variable is not impacted by conjunctures specific to national history.

[83] The exclusion of the scores from the 1980s does not mean a reduction in the number of countries selected for the analysis, because the countries in question have invariant constructs also from later surveys.

[84] These limitations are found in most cross-cultural surveys, the WVS being no exception. The wider the geographical scope, the less likely that structurally equivalent country indicators will fall within the same short timeframe.

[85] In view of the role of the military in technological innovation, one could wonder why these models of growth do not include a measure of military expenditure. The answer is that the growth-inducing impact (the "spinoff", in the terminology used by Ruttan and Mazzucato) of military R&D operates over the very long run. (For example, the funding for ARPANET, the US defense project initiated in the late 1960s leading to the creation of the Internet had not had a large-scale commercial impact until the implementation of the World Wide Web in the early 1990s.) The data available from the World Bank tracks military expenditure starting from 1996 — a too narrow time frame to measure the effect of military spending on economic growth. Also, the data do not distinguish between spending on military R&D and other military-related purposes. As a result, high military expenditure relative to the GDP might conceal very different activities: large-scale procurement of existing technologies in the case of nations at or in preparation for war, and countries modernizing their military infrastructure, investment in R&D of basic technologies, etc. Including the absolute value (in per capita dollars) of military expenditure as independent variable would be close to tautological, since this variable is also a proxy for GDP: rich countries spend more on their military.

[86] Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141.

Model Variable		Model 1	Model 2	Model 3	Model 4	**Model 5**	Model 6
Constant		11.34**	2.80**	2.59**	5.25*	**-1.22**	1.80**
		(2.44)	(.24)	(.23)	(2.19)	**(.80)**	(.34)
Per capita GDP in 1996 (logged)		-1.11**			-.67*		
		(.16)			(.26)		
Primary education (1970-96)		-.03					
		(.02)					
Secondary education (1970-96)		.02			.02*	**.03****	
		(.01)			(.01)	**(.01)**	
Investment (1970-2011)		.14**			.07		
		(.05)			(.05)		
Change in income inequality (1987-2006)		-.02					
		(.06)					
Former colonial power, 20th century				-1.69**	-.88	**-1.42****	-1.44**
				(.38)	(.45)	**(.35)**	(.41)
Former colony, 20th century				-2.40*	-1.0		
				(.94)	(1.0)		
Authoritarian regime (post-1945)						**1.48****	1.11**
						(.33)	(.38)
Political violence (1980 to survey year)				1.04**	.72**	**1.16****	.98**
				(.19)	(.21)	**(.14)**	(.15)
Values from ecological MCA	Religiosity		.01				
			(.49)				
	Authoritarianism		2.44**	1.19**	.10		
			(.50)	(.41)	(.59)		
R^2 Adjusted		.69	.33	.68	.74	**.74**	.64
SEE		1.04	1.26	1.05	1.0	**1.0**	1.08
Durbin-Watson		1.95†	1.82†	1.86†	1.92†	**1.68†**	1.83†
Jarque-Bera ($\chi^2(2)$)		4.52	14.61**	8.57*	2.58	**7.04***	11.09**
White ($\chi^2(^{\times})$)		36.66*	3.17	22.85	36.39	**19.51**	16.76
$^{\times}$df		(20)	(5)	(14)	(35)	**(14)**	(9)

Table 10 OLS estimation of mean rate of per capita economic growth (1996-2013) with authoritarianism and religiosity
(Partial Set)

Note: Dependent variable is mean rate of per capita economic growth, 1996-2013. Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the indicators. Best performing model in bold fonts.
N is 45 for all models. Unstandardized regression coefficients; standard errors in parentheses.
* p < .05, ** p < .01

Model Variable		Model 1	Model 2	Model 3	**Model 4**	Model 5	Model 6
Constant		3.88** (1.17)	6.04** (.86)	4.81** (.76)	**3.58*** **(1.36)**	-1.50* (0.72)	6.16** (.82)
Per capita GDP in 1996 (logged)		-.69** (.15)			**-.55**** **(.17)**		-.44** (.09)
Primary education (1970-96)		.0 (.01)					
Secondary education (1970-96)		.02* (.01)			**.02*** **(.01)**		
Investment (1970-2011)		.14** (.03)			**.12**** **(.03)**	0.14** (0.03)	
Change in income inequality (1987-2006)		.08* (.03)			**.06** **(.03)**	0.09** (0.03)	.15** (.03)
Former colonial power, 20th century				-1.04* (.41)	**-.44** **(.34)**		
Former colony, 20th century				-.94* (.39)	**-.42** **(.39)**		
Authoritarian regime (post-1945)						0.67* (0.30)	
Political violence (1980 to survey year)				.40** (.13)	**.30**** **(.11)**	0.41** (0.10)	
Schwartz's ecological values	Autonomy vs. embeddedness		-.003 (.25)				
	Egalitarianism vs. hierarchy		-1.52** (.38)	-.93** (.29)	**-.15** **(.28)**		
	Harmony vs. mastery		.57 (.51)				
R^2 Adjusted		.58	.27	.39	**.62**	0.54	.42
SEE		1.0	1.15	1.10	**.97**	1.02	1.09
Durbin-Watson		1.87†	1.93†	2.04†	**2.08**†	2.22†	1.71†
Jarque-Bera ($\chi^2(2)$)		13.63**	15.31**	11.16**	**11.14****	12.26**	19.83**
White ($\chi^2(^{\times})$)		45.19**	26.03**	40.92**	**53.19**	41.91**	8.50
$^{\times}$df		(20)	(9)	(14)	**(41)**	(14)	(5)

Table 11 OLS estimation of mean rate of per capita economic growth (1996-2013) with Schwartz's three ecological values
(Expanded Set)

Note: Dependent variable is mean rate of per capita economic growth, 1996-2013. Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the indicators. Best performing model in bold fonts.
N is 66 for all models. Unstandardized regression coefficients; standard errors in parentheses.
* p < .05, ** p < .01

As in GIL's models, per capita GDP at the beginning of the period (1996) is negatively correlated with economic growth in both sets of regressions.[87] This means that the economy in poorer countries has grown at significantly higher rates than in rich countries. Taking into account the significant positive correlation of investment, this finding seems to corroborate the conditional convergence hypothesis. The positive effect of change in inequality in the Expanded Set — poorer societies having a more unequal distribution of income — points in the same direction. However, the diagnostic tests[88] indicate that the residuals in both reference models are heteroskedastic, and, in the case of the Partial model, not normally distributed. These models therefore have a bad fit and should not be retained for drawing conclusions.

In Model 2, with only values as independent variables, the explained variance in both sets falls to about half its value in the reference model — yet around 30%, it is still large. Moreover, the coefficients across the Partial ad Expanded Sets point to the same underlying phenomenon. Recall from Chapter 1 that the authoritarianism construct is negatively correlated with Schwartz's measures of autonomy versus embeddedness and egalitarianism versus hierarchy. (In other words, the two letter constructs are related to different aspects of authoritarianism.[89]) In Model 2 of the Partial Set, authoritarianism has a strong positive correlation with economic growth. This means that the economy in countries with more authoritarian populations has grown at higher rates during the observation period than it has in countries with less authoritarian populations. Given that in the Partial Set of 45 countries, nations having recently transitioned from authoritarian to democratic regimes constitute a higher portion than in the Expanded Set of 66 countries, this could simply suggest that recently democratized nations tend to grow at faster rates. However, the negative coefficient of egalitarianism versus hierarchy in the Expanded model points to a general rule (at least for the 18-year period examined): the countries with more authoritarian populations indeed have higher rates of per capita GDP growth.

This finding involves two interpretations. On the one hand, since authoritarianism is also a proxy for national affluence, it may be a confirmation of conditional convergence: poorer economies grow at a faster rate. On the other hand, it can indicate problems with endogenous growth theory: the culturalist reinterpretation of neoclassical theory posits a positive relationship between self-actualization, an anti-authoritarian outlook and innovation

[87] The countries included in the regressions are shown in Table 21 Appendix 1, p. 151.

[88] See Note *A1.3.2. Diagnostic tests* in Appendix 1, p. 142 for these measures.

[89] See Table 6 in Chapter 1.

— and hence economic growth. Obviously, the timeframe in this study may not be sufficient to adequately test the latter proposition, and it can be that over shorter periods, the effects of conditional convergence are more important than are those of endogenous growth. (The positive correlation between achievement motivation — an anti-authoritarian value — in GIL's models pertains to mean rates of growth measured over 30 years.) Before drawing any conclusion, however, notice that religiosity in the Partial Set, and autonomy versus embeddedness, and harmony versus mastery in the Expanded Set have not been found to be significant predictors of economic growth. This is an important finding, and underscores the arguments against measures conflating authoritarianism with religiosity, reviewed in detail in the previous chapter.[90] Also, Model 2 performs better than the previous ones across both sets — but the residuals are still heteroskedastic in the case of the Expanded Set.

The subsequent models provide further insight into this relationship. As the factors related to historical context enter the model (Model 3 in both sets), the still significant effects of authoritarianism and egalitarianism versus hierarchy are substantially reduced. This is because former colonial status and exposure to political violence explain away much of the relationship between authoritarianism and economic growth.[91] The economy in former colonies and in societies that have undergone periods marked by violence in the last decades of the 20th century has grown at higher rates. As these nations happen to be poorer, this is another indication of convergence.

With regard to the linkage between economic growth and authoritarianism, Inglehart's later study on the processes of political emancipation includes a proposition that appears to be at odds with the thesis examined here:

> "(E)arly industrialization did not bring a pronounced shift toward self-expression values. Indeed, it seems likely that the emphasis on individual autonomy underlying self-expression values was more widespread in some preindustrial societies than in industrial society. Industrialization is linked with increasing emphasis on economic

[90] The insignificant correlations between the latter two Schwartz constructs and growth rates are also consistent with religiosity's negative correlation with autonomy versus embeddedness and harmony versus mastery (Chapter 1, Table 6).

[91] Other models in the same sets included a measure of democracy as independent variables. Their coefficients are not reported here because democracy has not been found to be a significant predictor of economic growth in any of these models. Democracy becomes a significant predictor in the models of per capita GDP (see next section).

accumulation and economic growth — and the mass-production assembly line requires conformity and discipline, rather than individual creativity and self-expression." (Inglehart-Welzel 2005: 34).

The contradiction could be resolved by pointing out that GIL's 1996 studies focused on mainly *already industrialized* countries, whereas the above argument relates to societies in the "take-off" phase (Rostow 1959) where authoritarian values are believed to bestow a competitive advantage. But the 1996 studies make it clear that they propose a *general* model of endogenous growth. Nevertheless, Inglehart's later proposition could still find support in the significant correlations between growth rates and the measures of authoritarianism across both sets. After all, the nations that were still in the early phase of industrialization at the turn of the century had obviously grown at higher rates.

However, in both sets, *the remaining variance of the dependent variable related to values is explained away in Model 4 in both sets, where the macroeconomic indicators are brought back in*. Per capita GDP at the beginning of the period, secondary education and political violence retain their significant impacts. The coefficient of authoritarianism and autonomy versus embeddedness is further reduced and becomes insignificant. Crucially, this is the first model that passes all diagnostic tests in the Expanded Set (Table 11), where values are measured by Schwartz's scales. Compared with that, the removal of insignificant predictors from Model 4 and the variables responsible for bad fit from Model 5 reduces the explained variance and leads to a worse fit in Model 6.

In the Partial Set (Table 10), Model 5 emerges as superior based on the diagnostics,[92] and it also has the highest explained variance. Introducing a variable accounting for authoritarian regimes after 1945 while dropping initial per capita GDP, the explained variance does not decrease and the model becomes more straightforward. Poorer countries have achieved higher rates of economic growth, tend to have more authoritarian publics and are more likely to have lived under authoritarian regimes after 1945. Political violence remains a significant predictor in both sets.

Let us briefly sum up how the models presented in this section compare with GIL's regressions of economic growth. Their strengths include the wider geographical coverage, the structurally equivalent measures of cultural values, the value scores that in the majority of

[92] Model 4 in the Expanded Set and Model 5 in the Partial Set have also the lowest squared residual variance or standard error of measurement (SEE) in both sets, another indication of best fit.

cases predate the dependent variable (and are anterior to most of the growth period considered where they come from surveys after 1996), and the historical factors among the independent variables. Their weakness has to do with the shorter timeframe (18 versus 30 years): average growth rates over shorter periods are more subject to periodic fluctuations. Nonetheless, a near 2-decade timescale is not too narrow, and given the options between a longer timescale and a more realistic chronological sequence of the independent and dependent variables, the model specification is defensible. In sum, with a specification using contextual factors and more appropriate indicators of culture, we have not found a significant effect of values on economic growth rates.

2.3.2. Per capita GDP

Table 12 (Partial Set, p. 89) Table 13 and (Expanded Set, p. 90) show results from regressions of per capita GDP. Because GIL's models do not include per capita GDP as dependent variable, these models merely complement the models of per capita GDP growth.

Most of the independent variables from the previous set have been preserved, although with some modifications required by the change in the dependent variable. Income inequality now corresponds to the mean value of the Gini coefficient between 1997 and 2006, and political violence is the average for the period 1980-2008. Exposure to authoritarian regime is replaced by an indicator of democracy for the period 1990-2008; the mean ratio of private plus public domestic investment by expenditure on research and development relative to the GDP.[93] Finally, the models do not include baseline per capita GDP, since such an independent variable would pick up most of the variance and the models would become tautological.

The interpretation is made easier in that the all models across the two sets pass all the diagnostic tests. Not surprisingly, R&D expenditure is a significant predictor of per capita GDP in most models.[94] The predictive power of values is stronger in both sets: in the "values only" Model 2, both religiosity and authoritarianism in the Partial Set, and two of the three Schwartz instruments (autonomy, in addition to egalitarianism) in the Expanded Set have significant coefficients. Compared with the growth models, the correlations with authoritarianism and autonomy are now negative: higher per capita GDP figures are related to

[93] The replaced variables have not been found to be significant predictors in any of these models.

[94] It would be difficult to interpret this finding as evidence of the short-term growth-inducing effect of R&D. R&D expenditure is used because the effect of the ratio of investment on per capita GDP is not significant. Rich nations tend to spend a higher percentage of their GDP on R&D.

less authoritarian, more autonomous publics. (Authoritarianism positively correlated with per capita GDP growth because the economy in poorer countries has grown at higher rates.) The contextual factors (Model 3) are also significantly correlated with the dependent variable. They also explain away the effect of religiosity and egalitarianism (Model 4), while authoritarianism and autonomy retain their significant, albeit reduced impacts.[95] The negative coefficients of income inequality across both sets confirm the recent findings by Acemoğlu and Robinson (2012) and Piketty (2013) that high rates of inequality are a drag on *long-term* growth.

An important difference with the growth models is that authoritarianism and autonomy retain their predictive power across all models in both sets — that is, even when the variables with significant coefficients from Model 1 are reintroduced in Model 5. Also instructive is the change in explained variance when the value measure is dropped in Model 6: it is important (15%) in the Partial Set but less pronounced in the Expanded Set (3%). (The latter matters more because of its wider geographical coverage.) A good part of the variance explained by Schwartz's autonomy instrument in Model 5 is picked up by R&D expenditure, democracy, and political violence in Model 6. The positive correlation with levels of democracy across the Expanded Set, together with the small decrease in explained variance with the dropping of the autonomy variable in Model 6 is a strong indication that it is political arrangements, not cultural values that are decisive regarding differences in domestic output. Discussing the discrepancies between citizens' cultural values and forms of governance in his later writings, Inglehart admits such macro effects with regard to government accountability, but he does not consider this possibility for the explanation of economic development.[96]

[95] These results again confirm that Schwartz's autonomy and egalitarianism scales are related to different aspects of authoritarianism.

[96] "Relatively widespread self-expression values in such countries as Chile, South Korea, and Hungary could not *initiate* regime changes toward more democracy as long as these countries' authoritarian regimes obtained financial, military, and political support from one of the two superpowers." (Inglehart and Welzel 2005: 215, emphasis added)

Model Variable		Model 1	Model 2	Model 3	Model 4	**Model 5**	**Model 6**
Constant		5.96** (1.48)	9.40** (.10)	9.47** (.51)	9.69** (.46)	**9.42**** **(.47)**	**9.47**** **(.51)**
Primary education (1970-96)		.02 (.01)					
Secondary education (1970-96)		.01 (.01)					
R&D expenditure, % of GDP (1996-2011)		.93** (.15)				**.23** **(.13)**	
Income inequality (1987-2006)				-.03* (.01)	-.02* (.01)	**-.02*** **(.01)**	**-.03*** **(.01)**
Former colonial power, 20th century				.64* (.24)	.57** (.17)	**.49**** **(.17)**	**.64*** **(.24)**
Democracy (1990-2008)				.13** (.03)	.08** (.02)	**.07**** **(.02)**	**.13**** **(.03)**
Political violence (1980-2008)				-.46** (.11)	-.23* (.09)	**-.25**** **(.09)**	**-.46**** **(.11)**
Values from ecological MCA	Religiosity		-.63** (.21)		-.18 (.19)		
	Authorita-rianism		-1.93** (.22)		-1.21** (.19)	**-.95**** **(.23)**	
R^2 Adjusted		.58	.66	.68	.83	**.84**	**.68**
SEE		.87	.83	.82	.70	**.69**	**.82**
Durbin-Watson		2.06†	2.23†	1.75†	2.13†	**2.17**†	**1.75**†
Jarque-Bera (χ^2(2))		14.08**	29.51**	19.91**	18.72**	**15.49****	**19.91****
White (χ^2($^{\times}$))		16.09	7.85	20.83	24.31	**27.32**	**20.83**
$^{\times}$df		(9)	(5)	(14)	(27)	**(27)**	**(14)**

Table 12 OLS estimation of logged per capita GDP (2013) with authoritarianism and religiosity (Partial Set)

Note: Dependent variable is logged per capita GDP, 2013. Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the indicators. Best performing models in bold fonts.

N is 45 for all models. Unstandardized regression coefficients; standard errors in parentheses.

* p < .05, ** p < .01

Model Variable		Model 1	Model 2	Model 3	Model 4	**Model 5**	**Model 6**
Constant		4.86** (.51)	7.58** (.45)	9.22** (.47)	8.55** (.57)	**7.40**** **(.31)**	**6.68**** **(.26)**
Primary education (1970-96)		.02** (.01)					
Secondary education (1970-96)		.02** (.0)				**.01**** **(.0)**	**.02**** **(.0)**
R&D expenditure, % of GDP (1996-2011)		.59** (.11)				**.29**** **(.11)**	**.48**** **(.10)**
Income inequality (1987-2006)				-.03** (.01)	-.01 (.01)		
Former colonial power, 20th century				.73** (.27)	.17 (.24)		
Democracy (1990-2008)				.16** (.03)	.06* (.03)	**.06*** **(.02)**	**.09**** **(.02)**
Political violence (1980-2008)				-.31** (.10)	-.19* (.09)	**-.16*** **(.07)**	**-.19*** **(.08)**
Schwartz's ecological values	Autonomy vs. embeddedness		1.38** (.14)		1.09** (.18)	**.65**** **(.18)**	
	Egalitarianism vs. hierarchy		.53** (.20)		.10 (.18)		
	Harmony vs. mastery		-.45 (.27)				
R^2 Adjusted		.77	.76	.65	.78	**.84**	**.81**
SEE		.82	.83	.91	.81	**.75**	**.79**
Durbin-Watson		1.94†	1.75†	1.83†	1.72†	**1.61**†	**1.82**†
Jarque-Bera ($\chi^2(2)$)		19.88**	26.04**	30.76**	30.54**	**22.38****	**26.36****
White ($\chi^2(^{\times})$)		7.79	7.39	13.79	24.29	**17.29**	**10.38**
$^{\times}$df		(9)	(9)	(14)	(27)	**(20)**	**(14)**

Table 13 OLS estimation of logged per capita GDP (2013) with Schwartz's three ecological values (Expanded Set)

Note: Dependent variable is logged per capita GDP, 2013. Refer to Note *A1.3.1. Variables used in the* models in Appendix 1, p. 141 for the definition of the indicators. Best performing models in bold fonts.

N is 65 for all models. Unstandardized regression coefficients; standard errors in parentheses.

* p < .05, ** p < .01

A recurrent argument in culturalist theories of economic growth (e.g., Putnam (1993)) is that the cultural heritage of authoritarian power structures has a *direct* negative impact on *long-term* growth, therefore explains persisting differences in per capita output. Before interpreting the small residual effect of a variable related to authoritarianism on levels of per capita GDP as evidence of the plausibility of this argument (compatible with endogenous growth theory), we have to consider another possibility. Controlling for contextual factors, this might be attributable to a reverse effect — that is, at more advanced stages of economic development, attitudes required for coping with the challenges of postindustrial society give rise to attitudes that are at odds with the authoritarian mindset. This explanation is in line with the conclusions of the earliest criticisms of Inglehart's work, most importantly by Flanagan (1982a, 1982b, reviewed in Chapter 1). It also endorses Hirschman's observation that "the many attributes alleged to be preconditions of industrialization could be generated on the job […] by certain characteristics of the industrialization process" (1984: 99).[97] Moreover, it is also compatible with the "minimalist" version of the postmaterialism thesis, which restricts the "detraditionalizng" effect of economic growth to a decrease in authoritarianism. In this respect, the finding that religiosity (like its "Schwartz-correlate", embeddedness) loses its predictive power in models of per capita GDP when contextual effects are controlled for is significant: increasing national affluence is not a driver of secularization. It can be a "driver" — or at least *correspond to* a de-emphasis — of authoritarian values. However, evidence from the study presented in the previous chapter suggests that causation in the opposite direction — that is, reversion to authoritarian values in times of economic downturns, as proposed by Inglehart and Baker (2000) — is not likely, at least not over short periods.

2.4. Conclusion

In his review of Orientalism, B. Turner points out that "the main focus of criticism must […] be couched at a more theoretical level by demonstrating the incoherence of the paradigm which generates a series of false problems about bourgeois entrepreneurship, […] spontaneous capitalist development and stationary societies" (1978: 394). Inglehart's study of

[97] Flanagan's finding from the early 1980s that rapid economic growth in East Asia has been conducive to a shift away from traditional values has found recent empirical support (Chee-Beng 2011). In particular, advertising efforts to increase household consumption in line with corporate growth imperatives have been proposed as instrumental in mediating this effect (Ciochetto 2011).

the relationship between cultural values and economic growth constitutes an empirical offshoot of this paradigm. For this reason, it is an important reference for the scholarship critically engaging with culturalist approaches to the study of macroeconomic phenomena. This chapter has attempted to give a theoretical overview, augmented with an empirical demonstration.

Because "(t)he durability of neoclassical economics is in its ability to absorb all challenges to its organizational hegemony" (Finlayson et al. 2005: 523), a significant effort in the discursive space of late capitalism goes into accommodating criticism of neoclassical economics. These efforts have gained momentum as the policies enacted starting with the 1970s and justified with reference to the dominant school in economics have drawn significant opposition. However, disagreements between actual government policies and the dominant representations of market mechanisms will be reconciled by improvements to the theory that do not constitute a departure from those representations. Therefore, while attempts at bringing cultural variables into endogenous growth models recognize that attitudes, motivations, consumer preferences, etc. are not exogenous to the investigation, the update proposed is fully compatible with the original presuppositions. This is because the cultural update leaves intact the assumption of outcomes conditional on endowments that economic actors *bring* to the market. If not all actors are fully or equally rational, then — within the bounds of the proposed modifications — this means that the "returns to their investments" individually or collectively will reflect those differences. These differences, although expressed in cultural terms, boil down to natural differences because culture is a variable left unexplained.

The culturalist reframing of endogenous growth theory does not depart from the standard neoclassical assumptions of utility-maximizing individuals engaged in market competition.[98] While the *universalistic* definition of "utility" and "rationality" does not hold in

[98] In a review of culturalist schools' efforts to incorporate values in endogenous growth theory, Maseland (2005) writes that "(m)erely filling in the preferences within the neoclassical model does not amount to any theoretical insights, nor does it make clear what would be the difference between culture and other sources of preference, so that to speak of 'culture' instead of 'preference' has no genuine added value. […] Only when combined with an elaborate theory about the nature, emergence and development of cultural preferences, such work could fundamentally contribute to our understanding of the economy. Unfortunately, such a theory is hardly available in the data-sets of Hofstede, Inglehart, or Schwartz underlying most of this work. That is not to say that this work is entirely devoid of theory; but a theory about the *origins* and *development* of cultural values is absent." (7, emphasis added).

the case of GIL's updated endogenous growth model incorporating cultural variables, the two approaches are similar in their methodological individualism whereby both neglect contextual factors. Values enter the endogenous growth model as "isolated", that is, without being explained, and are considered as mere emphases impacting the importance of achievement. As a result, the assumption of micro-to-macro causation, macro outcomes resulting from simple aggregation of atomized individual found in neoclassical economy remains unchallenged.

Against these assumptions, the various historical processes reviewed in this chapter indicate that the economy in major industrial powers has been growing at a steady rate *despite* the absence of private investment in basic technological innovation within a market framework responding to existing consumer demand. If by "market framework" is meant a variety of bottom-up processes driven by autonomous consumer demand, then the empirical evidence provides a refutation. Forced labor and large-scale piracy at the onset of industrialization; R&D dependent on public funding, and a patent regime designed to secure monopoly profits earned thanks to taxpayer money at later stages; protectionist trade policies and militarism throughout — the sources of economic growth are hardly the kind of innovation effort implied in endogenous growth theory. While this latter does allow for patenting (a form of "monopoly"), but only to the extent of compensating for the *firm's* risk taking effort in "devot[ing] resources to invent new products" (Barro and Sala-i-Martin 2004: 285). As we have seen however, the risk taking implicated in the processes conducive to innovation in basic technologies and growth occurs mostly *beyond* the firm's reach. Left to its own devices, the firm cannot provide the resources required for technological breakthroughs. Rather than standing as empirical evidence of the plausibility of endogenous growth theory, the processes sustaining technological innovation are related to state capitalism, market oligopolies, and rent-seeking. In other words, the "free market" is neither a necessary condition, nor a major driver of technological innovation and economic growth.

This is an important point because the specification problems with regard to GIL's model include the handling of responses to a question on savings behavior as a proxy for corporate and government savings without presenting empirical evidence. Even if such a linkage could be established, the various processes stimulating the economy to grow indicate that growth is dependent on *debt creation* rater than savings. In particular, public investment in basic technological innovation, a costly process with no marketable output in sight during a long period of gestation is impossible without high levels of public debt. Also contributing to

debt creation is the actual patent regime in the United States where the costs of R&D are borne by the public but the rewards of patent protection are collected by corporate interests with political clout. From the "savings" perspective underpinning GIL's endogenous growth model, this is a highly inefficient arrangement — nonetheless, the economy keeps growing under this paradigm.

The empirical models of growth and per capita GDP incorporating the religiosity and authoritarianism constructs as well as Schwartz's value scales lend support to the criticism of GIL's proposed update to the endogenous growth model. In models of growth rates, the predictive power of values is progressively reduced to zero when controlling for contextual variables. With per capita GDP as dependent variable, a modest correlation with authoritarianism/autonomy persists even after controlling for contextual factors. However, this might be an indication of the cultural change triggered by the transformation related to economic growth. These results corroborate the study by Edwards and Patterson (2009) which, addressing the problem of endogeneity using more robust tests, have found that economic variables encompass (cannot be separated from) those representing culture.

The theoretical implication following from these (as well as all) growth models is a *caution against generalization*. Given the complexity of the mechanisms at work and the scarcity of data over long periods, it is difficult to identify a universal pattern of growth by relying on correlations alone. Findings from any regression *per se* are not evidence of causation in any hypothesized direction — nor is explanation the exclusivity of regression. It does not follow from the empirical growth models discussed in this chapter that exposure to authoritarian regimes or political violence is a necessary condition to achieve high rates of economic growth. As significant predictors, these factors merely indicate that between 1996 and 2013, the economy has grown faster in poorer countries. Nevertheless, the fact that militarism is the primary source of technological innovation means that this avenue of funding is contingent on the political efforts to justify high military expenditure in response to armed conflicts or credible threats thereof.[99] But the models discussed here do not link the political violence produced *beyond* national boundaries with the processes of R&D and output

[99] "The first question is, can the private sector be relied on as a source of major new general-purpose technologies? The quick response is that it *cannot*! […] Each of the general-purpose technologies that I have reviewed have required several decades of public support, primarily in the form of military R&D and defense or defense-related procurement, to reach the threshold of commercial viability." (Ruttan 2006: 177, emphasis in the original)

growth.[100] Similarly, a significant residual (but slight additional) effect of variables capturing cultural values on growth, even in models with the best fit is not evidence of "culture making the difference" because this can also indicate that cultural change is a corollary of industrialization.

Regressions, like all attempts at formalized explanation in the social sciences yield plausible inferences only when grounded in a solid historical account. The latter is remarkably absent in the culturalist reformulation of the endogenous growth theory presented by Inglehart and his collaborators. Placed within the context of the heterodox perspective, the findings presented in this study suggest that economic growth is not "driven" by cultural values. This proposition includes an important proviso: *if by culture we mean the kind of "thing" implied by conventional* wisdom: a reification of mental representations abstracted from their objective referents. The last chapter expands on this largely overlooked aspect of the research tradition followed in Inglehart's work.

[100] See earlier remark on the inclusion of military expenditure in models of per capita GDP growth.

3. Symbolic versus material forms of agency

A longer version of the section titled "Weber versus substantialist reason" has been published in Volume 5, Issue 1 of Elpis in Hungarian under the title "Az elektív affinitás: a fogalom hanyagolásának okai és következményei" ["Overlooking Elective Affinity: Causes and Consequences"] (Lakatos 2011). Copyright for this part is held by the author.

At a superficial level, it could seem that the two Inglehart theses on social change presented in Chapters 1 and 2 use two opposed lines of reasoning. The postmaterialism thesis and its later formulation conceive of value change as a corollary of economic growth and stress that cultural shifts stem from major changes in the material conditions of existence. In contrast, the attempt to update the endogenous growth model with a cultural variable is based on a proposition positing a reverse causation. In addition to the argumentation followed in these studies, later reengagements with the issue show that Inglehart has been grappling with the problem of directionality:

> "Modernization theorists from Karl Marx to Daniel Bell have argued that socioeconomic development *brings* pervasive cultural changes. But cultural theorists from Max Weber to Samuel Huntington have claimed that cultural values have an enduring and *autonomous* influence on society. Paradoxically as it may seem, both schools are right." (Inglehart and Welzel 2005: 48, emphasis added).

> "We believe that economics shapes culture and politics — *and* vice versa. The causal linkages tend to be reciprocal. Political, economic, and cultural changes go together because societies without mutually supportive political, economic, and cultural systems are unlikely to survive for long: in the long run, the respective components adapt to each other or the system flounders." (Inglehart 1997: 15, emphasis in the original).

These quotes make it clear that Inglehart's answer to the dilemma of causality with regard to the cultural or economic "origins" of social outcomes has been a cryptic "both". By

alluding to the posited reciprocity as paradoxical, he proposes an escape from the impasse that has the somewhat dialectical appearance of reconciling conflicting logics. In this chapter, I argue that this proposed resolution is mistaken (and even meaningless) on two counts. First, reciprocal effects can occur between entities that can be shown to exist in the first place. Therefore, in order to resolve the dilemma raised by Inglehart, one has to first demonstrate that the "respective components": the economy and culture (or, additionally, politics) indeed constitute *discrete* domains of social reality. An unfortunate but pervasive tendency in value research is to evade this discussion and reify these categories, which, at close inspection are merely analytical. Second, the postulate of reciprocal causality between these reified entities is not paradoxical at all: it stems from the substantialist vision of reality that postulates that self-contained substances exist and moreover constitute the primary focus of inquiry. Therefore, if economy and culture are indeed objectively delimited entities, it is reasonable to suppose that they *interact*, and that these interactions include impacts in both directions. As both Inglehart theses assessed in this study are built on an implicit adherence to this postulate, a critical assessment has to also dissect the underlying rationale.

This chapter is intended as an overview of the major issues with the theses reviewed in the first two chapters. The first part outlines the substantialist reason from the perspective of field analysis, the alternative proposed to overcome the limitations of Inglehart's approach. Using Weber's concept of elective affinity, formulated in his Protestant ethic thesis as a guide, the second part examines the sociologically most pertinent aspect of the substantialist perspective: the distinction between cultural and objective conditions. It contrasts the complex argumentation in the PE thesis with its interpretation in some of the most influential references to his work, including Inglehart's. The third part organizes the insights from the earlier sections with reference to Bourdieu's studies on symbolic power. The fourth part applies the principles of field theory to the dilemmas facing practitioners of value research in connection with the value dimensions and the construct validity issues identified in Chapter 1.

3.1. Substances versus relations

The conventional distinction between realms of culture and economy corresponds to the opposition between subjective/symbolic and objective/material aspects of agency. This opposition is one of the most enduring legacies of Western civilization. At a most elementary level, it reflects thinking in terms of *substances*. *Field theory* — the general framework of

relational sociology, the approach proposed in this chapter as an alternative to the research tradition followed by Inglehart represents a break with this thinking. The main differences between the approaches can be spelled out as follows.

Substantialist reason focuses on entities and various properties attributed to them. Entities are represented as objectively limited, albeit not disconnected parts of reality. Applied to human behavior, they correspond to discrete units of observation such as individuals or groups of individuals — but also autonomous domains of action. When such domains translate oppositions — e.g., "culture" and "economy" —, they constitute *counter*parts. In statistical formalization, the focus on entities means that the analysis privileges *the variables*. The fact that in the social sciences, including its substantialist currents, description and explanation are formulated in terms of individual or collective behavior is not incompatible with this feature. Depending on formulation, anything can be vested with the status of entity — collectivities as well as individuals. The variables refer to those basic properties of the entities that are decisive regarding the outcome (the dependent variable). The entities enter into relation via *direct contact* in a quasi-mechanical framework. To explain outcomes, the inquiry will isolate a set of properties (independent variables) which, acting as vectors, drive one set of entities into impacting others in a chain of successive contacts. Outcomes — values of the dependent variables — are represented as deductible and predictable from the properties of the interacting entities.

Substantialist thinking has long been overcome in the natural sciences (Cassirer 1953; Hesse 1970). This is because modern physics and chemistry in particular owe their existence to a break with substantialist reason: disregarding relations and attributing substances to analytical categories is the hallmark of prescientific thinking. The focus on substances is a focus on sensations — that is, an inventory of easily accessible qualities that transpire before the inquiry has even started. This one-sided preoccupation gives rise to a series of false problems. Surveying early inquiries into electricity, Bachelard (2002) shows that their standard assumption was that electricity is a substance — as opposed to the scientific view, which regards electricity as a *flow*. Electricity — the flow of electrons — is a dynamic phenomenon involving a constant rearrangement of its "constitutive" elements within a field of force. But this dynamic character is not recognized by substantialist reason: for example, from the observation that dust sticks to a body charged with electricity, it will conclude that "electricity is glue" (ibid.: 109). Representing electricity as a flow requires an inconvenient break: it is easier to think of things as "self-contained", discrete entities, than as relational

phenomena lacking definite attributes, constantly evolving, and existing within the interaction of parts. Likewise, chemistry originates in the recognition that the properties of compounds do not derive from, and are thus unexplainable with reference to the properties of the constituting elements. Complex, interrelated arrangements, like compounds have emergent properties that result from relations, the chemical bonds between the parts.

Proponents of field theory hold that substantialist thinking is still the dominant paradigm in the social sciences (Abbott 1988, 1992b; Bourdieu and Wacquant 1992a, 1992b Emirbayer 1997; Emirbayer and Mische 1998; Martin 2003; Savage and Silva 2013). To situate current substantialist sociological approaches, Emirbayer (1997) refers to a typology by Dewey and Bentley (1949) distinguishing between *self-action* and *inter-action* as two subclasses of substantialist perspectives. Both consider entities as fixed and clearly delimited, and maintain the postulate of direct contact but their focus is different. In *self*-action, things act "under their own powers" (Emirbayer 1997: 283), while in *inter*-action, "the relevant action takes place *among* the entities themselves" (ibid.: 285, emphasis in the original), and it is the "variables [the attributes of the entities that] do things, not social actors" (Abbott 1992b: 441). [101] Emirbayer identifies methodological individualism (especially rational choice theories and its variants in game theory), norm-based currents in critical theory, value research and microsociology, holistic neofunctionalist and systems theories with the self-action perspective; the variable-centered paradigm from survey research to historical-comparative analysis with the inter-action perspective.

In contrast, field theory is concerned with an investigation of *relations* because it is relations and not substances that constitute the explanandum available to rational inquiry. In the broadest sense, field theory refers to "those theories that do not involve a clearly existent substantial medium" (Martin 2003: 4). In the social sciences, field theory denotes those approaches that explain individual action with reference to *relative positions within a field structured along relations of force*. These originate in the totalistic perspective of Gestalt theories, as formulated in Lewin's psychology (1936), which emphasizes that perception can only be understood with reference to the field of perception — as opposed to a succession of stimuli, the view of behaviorism. Non-deductibility: the emergence of novel properties not reducible to the properties of the parts; and downward causation: "the influence the relatedness of the parts of a system has on the behaviour of the parts" (Schröder 1998: 447)

[101] Among proponents of field analysis, the latter approach is sometimes referred to as the "sociology of variables" (Esser 1996; Rouanet, Ackermann, and Le Roux 2000).

are synonyms for what relational sociologists call *field effect*. (It is the same relational orientation that separates chemistry from substantialist inquiries like alchemy.) The properties of the field, as well as "social properties [in general] are supervenient on individual properties and yet not reducible to those properties" (Sawyer 2001: 580): they determine, constrain action and perception. The relations of force within any field are constituted with reference to a specific gravitational principle — in social fields, this is a prize or value (V. W. Turner 1974), an asset, a stake or different types of capital (Bourdieu 1979, 1980a, 1980b) toward which the actors are oriented in "organized striving" (Martin 2003). Social fields are fields of struggle, although — as I will argue later in this chapter with reference to Bourdieu's theses on symbolic power — in order for the gravitational force specific to a field to exert its effects, it is not a necessary condition that its principle be recognized by the actors engaged in the struggle. To account for regularities in individual behavior, sociologists must get at that organizing principle — but that is not possible within the variable-centered perspective, where the objective is to maximize *explained variance*. To illustrate the issue, Lieberson (1985) uses an example from physics:

> "(S)uppose we visualize a study in which a variety of objects is dropped without the benefit of such a strong control as a vacuum — just as would occur in nonexperimental social research. If social researchers find that the objects differ in the time that they take to reach the ground, typically they will want to know what characteristics determine these differences. Probably such characteristics of the objects as their density and shape will affect speed of the fall in a nonvacuum situation. If the social researcher is fortunate, such factors together will fully account for all of the differences among the objects in the velocity of their fall. If so, the social researcher will be very happy because all of the variation between objects will be accounted for. The investigator, applying standard social research thinking, will conclude that there is a complete understanding of the phenomenon *because all differences among the objects under study have been accounted for*.
>
> Surely there must be something faulty with our procedures if we can approach such a problem without ever considering gravity itself." (Lieberson 1985: 102-3, emphasis in the original)

Lieberson gives a parallel from sociological research on occupational mobility. Variations in the dependent variable socioeconomic status (SES) are usually explained with reference to individual characteristics such as gender, education, parental SES, etc. (More elaborate, e.g., multilevel models might take into account nesting, that is, categories of contextual variables like region, ethnicity, etc.) An adequately specified model — one that will be accepted by the researcher as a "plausible" explanation of SES — will be reflected in high explained variance, significant predictors, etc. Whereas in the case of falling objects, it is understood that high explained variance and significant coefficients for the independent variables (object density and shape, etc.) do not provide an explanation of *why* things fall, such concerns are remarkably absent from much of empirical research in the social sciences. However, the question remains: "[d]oes that provide us with a clue as to the forces determining the dependent variable [occupational mobility]? The answer is, regretfully, probably not" (ibid.: 104).

In a similar fashion, the updated endogenous growth model proposed by Granato, Inglehart, and Leblang (GIL) (1996a, 1996b) based on regressions, like the alternative models presented in *this* study tell very little — in fact, nothing — about *why national economies grow*. My models merely show that with a different specification — and keeping to the same statistical tests —, it is possible to produce results that *appear* to contradict the conclusions derived from GIL's reference models at every major point. But none of these models "explains" what is of interest to us, namely differences in levels of output and rates of economic growth. Just as GIL's regressions provide no evidence that cultural values have an impact on economic growth, mine provide no evidence that they have not. Nevertheless, a specification resulting in a robust coefficient of a cultural variable (ceteris paribus) in a model of economic growth does not, in itself, indicate substantialist inquiry. On the other hand, an interpretation attributing various effects to this or that substance of property does. Perhaps nowhere is this more transparent than in the advocacy of noble substances:

> "A precious substance must be sought, so to speak, deep down. It is hidden under wrappings. […] Thus extracted, reduced, and purified, it is a quintessence; it is a juice. The commonly held ideal which has no difficulty in beguiling substantialist thought is that of possessing in a very small volume the principles of either *nourishment* or *healing*. This myth of substantial concentration is accepted without question. […] Once

a secret power has been attributed to a substance, you can be sure that the valorizing induction will know no further bounds." (Bachelard 2002: 124-125, emphasis added).

Applying to our study, once the precious cultural substance is found — e.g., "achievement motivation" in Inglehart's growth models —, it is proposed as a *solution*: literally and also metaphorically, as some kind of curative essence that should be fed to the system, the "body social" so that it can achieve the performance deemed ideal (in this case, high levels of production or economic growth). Corrupt substances can be equally effective: values "inimical" to growth will condemn an economy to stagnation or low growth rates. The same "curative implications" are also found with regard to the causal relationship in the opposite direction, from the economy to values. From the finding of a significant "impact" of economic growth triggering a shift to emancipative values follows that the system should have more of it — at least in cultural zones that are considered economically backward.

The difficulties related to the application of the general linear model (GLM) in the social sciences matter here because they are closely related to substantialist thinking. The typical research design in which GLM features prominently is the econometric approach, a variable-centered inquiry that is very difficult to reconcile with the relationality of social phenomena (Esser 1996; Clogg and Haritou 1997; Manzo 2005; Lebaron 2010). Econometric models are associated with the standard assumptions of neoclassical economics, which posit isolated and utility-maximizing actors. The quest in various currents of sociology to gain recognition by the dominant school in economics has led to the widespread adoption of the econometric approach, and hence, regression models (Rouanet and Lebaron 2006) — and also to the often articulated belief that the GLM is an *explanatory* model.[102] GIL's updated endogenous growth model reviewed in the previous chapter is a case in point.

While the econometric approach supposes clearly isolable pure effects, the applicability of linear models is constrained by collinearity: the fact that social phenomena are contingent on a combination of interrelated effects, including structural effects. The solutions to this problem: path models, filling in interaction terms, increasingly sophisticated tests for autocorrelation, normally distributed and homoskedastic residuals, etc. do little to resolve the major issues associated with the unrealistic theoretical framework of the GLM. With

[102] "The 'explanatory' phraseology is the plague of regression. […] Any statistical method can be used for an explanatory purpose, as the case may be, but there is no such thing as an 'explanatory statistical method'." (Le Roux and Rouanet 2006: 20)

reference to Abbott (1988), the latter comprises the following assumptions: (1) social science deals with fixed entities with variable attributes, (2) the attributes of entities do not fluctuate over different periods, (3) the meaning of the attributes is univocal, (4) the sequence of the variables is identical in every case studied; (5) the determinants are not interrelated (proscription of collinearity), (6) the meaning of an attribute does not depend on the context. Beneath the complexity of GLM-formalization lies the substantialist reason inherited from pre-Newtonian science: "attributes determine each other principally as independent scales rather than as constellations of attributes" (Abbott 1992b: 433). It is with regard to these concerns that Bourdieu has been critical of the variable-centered Lazarsfeldian research tradition (Bourdieu and Wacquant 1992b; Wacquant 2013).

As opposed to this focus on entities, their properties and impacts in substantialist perspectives, the focus in field analysis is the gravitational force that "we can neither see nor measure except via its effects, and instead of trying to maximize explained variance, [field theory] proceeds by assuming in principle a perfectly simple determination" (Martin 2003: 5). Accordingly, the methods must be integrated in a research design where the inquiry takes into account the emergent and non-deductible qualities of the forces structuring the field. Correspondence analysis, the technique applied in this study to explore the space of cultural values has been developed in accordance with these principles. In Chapter 1, we have seen that using this method had helped identify latent dimensions that would have remained hidden or appeared less consistent using conventional, linear techniques like factor and principal component analysis. This is because correspondence analysis, by focusing on the relations between subjects and properties is more appropriate for getting at the latent principles structuring the field than are the data reduction techniques seeking "superimposable" metavariables. As a rule of thumb however — because it is not with this or that method that criticism of substantialist perspectives takes issue — field theorists caution against methodological fetishism, including that of correspondence analysis. What matters is awareness that "the most 'empirical' choices cannot be disentangled from the most 'theoretical' choices in the construction of the object" (Bourdieu and Wacquant 1992b: 225).[103]

[103] For example, field analysis and network analysis *can* be related perspectives (de Nooy 2003). The two approaches and their respective techniques are reconcilable and even complementary: network analysis can show how the latent principles structuring the field are translated into interactions between actors. The same applies to the combination of regression and geometric data analysis (Rouanet et al. 2002).

3.2. Weber versus substantialist reason

In the value-based subclass of the substantialist perspective, the object of inquiry is often constructed using Weber's theses on modern capitalism as something of an ultimate reference. The assurance with which it is accepted that Weber proposed that capitalism "emerged" as a corollary of a specific religious outlook permeates much of contemporary scholarship. This interpretation informed the works of Banfield (1958), Troeltsch (1958),[104] McClelland (1967), Harrison (1992), Putnam (1993), Huntington (2000), and Fukuyama (2001) — to name just some among the most influential. Inglehart has been consistent in his acceptance of this view, stressing that "[f]or Weber and his disciples, […] culture *shapes* economic and political life" (1997: 15, emphasis added), since Weber proposed that "the Protestant ethic *generated* the spirit of capitalism" (Norris and Inglehart 2004: 160, emphasis added).

In this section, I argue that the idea of culture-driven economic growth attributed to the Protestant ethic (PE) thesis is misleading. Revisiting the original Weberian propositions concerning the rise of capitalism, the focus of this discussion is the *elective affinity* between symbolic and material forms of agency. Weber's elaboration on the processes designated by this concept suggests that rather than a theoretical compass of the substantialist perspective, his PE thesis is a precursor of sociological field theory. In spite of that, its significance is typically overlooked in the canon on Weber, including those currents that strive to "endogenize" a cultural variable in econometric models.

3.2.1. Religion as "spur" or "drag"

Given the influence of the established reading of the PE thesis, value-based inquiries discuss religiosity in general, as well as specific religious cultures as either catalysts of or impediments to economic growth. Religious traditions are posited to impact growth in various ways, although cross-country and within-country regressions do not provide evidence that religious affiliation impacts economic performance (McCleary and Barro 2006; Noland and Pack 2004; Noland 2005; Young 2009). The insight attributed to Weber about the impact of

[104] Troeltsch, an early adopter of this interpretation went further than most and argued that in addition to the unintended consequence of asceticism, there is a second, direct relationship between Calvinism and capitalism. This is because in primitive Calvinism, "means are excluded from the consideration of righteousness" (MacKinnon 1988: 200).

the Protestant ethic on capital accumulation is often cited to point out that certain religious cultures exert a positive influence on growth, despite the fact that their tenets are inimical to the calculative behavior they "foster". In fact, much of the literature on the role of achievement values in economic development also includes a reflection on a Protestant "spark" inducing long-term economic growth in Medieval Western Europe, a theoretical benchmark against which other religious cultures *should be* compared. Inglehart follows this tradition by suggesting that those religious cultures that promote the moral outlook that, in the case of Protestantism, "played a key role in the rise of *capitalism*" (GIL: 1996a: 608) nurture the kind of conduct that is conducive to faster economic growth.

Most culturalist accounts agree that it is not the Protestant Ethic's theological substance but its non-religious repercussions that have been conducive to rational calculation, thrift, and an overall utilitarian outlook. Likewise, they stress that a statistically significant relationship between economic growth and *any* religious culture is not evidence of a residual effect of theological substance. Therefore, rising production rates are explained as an indirect and unintended consequence. Accordingly, Tawney's proposition (1926) that the rise of capitalism was facilitated by the retreat of religious worldview and the erosion of religious authority is not incompatible with the dominant reading of the PE thesis. This approach is perhaps even more pronounced in the work of Sombart (1951) who ascribed the role played by Jewish urban society in modern capitalist development to neither some intrinsic element of the Judaic tradition, nor even an unintended consequence of religious conduct, but to the emancipation of Jews from discrimination in late medieval and early modern Europe.[105]

Distinctions between theological substance, actual impact and embeddedness in a multitude of contexts tend to disappear as the focus shifts from Christianity to other religions, and the inquiry goes beyond the West. Such shifts usually result in the superposition of the ascribed theological substance over all other relevant contextual factors that the inquiry finds associated with a specific religious tradition. The treatment of Islam with reference to a religious essence is a case in point: the central propositions of Orientalism (Said 1979) can be read as a theoretical outline of culturalist accounts of socioeconomic development, especially

[105] This rather "structuralist" approach contrasts with Sombart's later writings (1934) where he invested ethnic groups — Jews included — with a cultural "essence", presenting a racialized view of socioeconomic development that reproduced many of the tenets of political anti-Semitism and even national socialism.

those invoking religious essence as explanatory variable.[106] In varying formats but intact in content, these ideas resurface in all culturalist accounts of socioeconomic development. As research programs, these seek to isolate those specific elements in non-Western *cultural* heritage (religious or otherwise) that would explain the absence of modern capitalist development in this or that society. This tendency to study culture through substantialist theoretical lenses extends also to currents critical of Western capitalism. For example, it is clearly formulated in the writings of Marx and Engels, who treated the Asiatic mode of production as inimical to socioeconomic progress (Marx and Engels 1972).

Culturalist accounts of socioeconomic development display remarkable variation as to where the roots of cultural "dynamism" and "stationariness" should be located. Therefore, it is more accurate to appreciate their core proposition as a postulate of an opposition between dynamism and stationariness — that is, regardless of their *actual carrier* (or "vessel"). It is then not surprising that recent culturalist efforts to explain the rapid economic growth of East Asian societies during the second half of the 20th century interpret this expansion as the outcome of some specifically Asian "work ethic" — usually one that stems from "Confucian values", "Confucian dynamism" (Hofstede and Bond 1988; Landes 1999) or "Confucian statist policies" (Swank 1996).

Sometimes the discovery of the "inherent dynamism" of specific non-Western cultures leads to the suggestion that the "universal virtues" of the Protestant Ethic may be present also in other religious traditions — giving rise to a "New Orientalism" (Lee 1997). Thus, for Inglehart, "the functional equivalent of the Protestant Ethic is *operating* most vigorously in East Asia and is fading away in Protestant Europe" (1997: 31, emphasis added) as "Confucian-influenced[107] societies […] have outperformed the rest of the world by a wide

[106] In his survey of Orientalism, Turner identifies four elementary propositions: (1) "a dichotomous contrast between the *static* history and structure of Islamicate societies and the *dynamic* evolutionary character of Occidental, Christian culture"; (2) "a list of *causes* which explain [this] stationariness"; (3) treating "Islam as an all-embracing, *undifferentiated* and *timeless* set of beliefs and practices" whose "psychological effects were to foster resignation, acceptance and fatalism", explaining the "absence of Western motives — achievement motivation, innovation, anti-authoritarianism"; and (4) a "predominantly idealistic and *essentialist*" epistemology (1978: 373-374, emphasis added).

[107] In Chapter 1, we have seen that the Japanese society is one of the most secular among those for which we have comparable data. The suggestion of "Confucian dynamism" does not eschew this diagnosis, but insists that a Confucian "mindset" is still palpable in the East Asian work ethic, therefore has an *indirect* positive impact on economic growth.

margin" (ibid.: 217). Leaving aside the fact that a great portion of the huge East Asian population follows religions other than Confucianism, Confucianism has a long history of being perceived as not only a stimulus but also a hindrance to economic growth in Western scholarship. For example, US sinologist, John Fairbank (1982) attributes China's failure to modernize along a Western trajectory to Confucian values, which he identified as "static" — just like those ascribed to Islam in culturalist accounts. Remarking the irony in the recent investment of Confucian values with a spark of capitalist dynamism, economic historian Harriet Zurndorfer points out that "*it is these same qualities* such as loyalty to one's family which made historians, social scientists, and not least Chinese intellectuals themselves, in the past regard Confucianism as an impediment in […] the process of institutionalizing capitalism" (2004: 4, emphasis added). In a similar fashion, there have been also attempts at locating a "dynamic core" in the tenets of Islam (Bellah 1958; Wertheim 1961; Kennedy Jr 1962; Alatas 1963). In sum, the "carrier" may change but the substance (progress-prone versus stagnating), the "state of mind" as vector remains intact.

3.2.2. Elective affinity

Curiously however, the ultimate reference of these culturalist accounts, Weber's PE essay not only does not propose a causal mechanism going from values to the economy, but explicitly cautions against a culturalist interpretation:

> "[…] we have no intention whatever of maintaining such a foolish and doctrinaire thesis as that the spirit of capitalism […] could only have arisen as the result of certain effects of the Reformation, or even that capitalism as an economic system is a creation of the Reformation. In itself, the fact that certain important forms of capitalistic business organization are known to be considerably older than the Reformation is a sufficient refutation of such a claim." (Excerpt from the chapter titled "Luther's Conception of the Calling" in Weber's first essay in the PE series; Weber 2005: 49)

This sounds clear enough, so the question is rather why Weber's warning continues to fall on deaf ears. It can be that once a text is admitted into the canon, the interpretation gains in prestige to the detriment of the content. Another possibility is that the original text includes an argument that lends itself easily to misinterpretation. In the following, I expand on that

latter factor by pointing out that while the logic of the argument in the Protestant Ethic was already difficult to follow at the time when Weber wrote his essays, it still presents readers with a challenge that is atypical with regard to even some of the most debated theories in the history of the social sciences. The key to this misunderstanding is Weber's concept of *elective affinity*, a concept borrowed from chemistry.

The trajectory of this concept in the various translations of Weber is revealing of the confusions surrounding it. Although it occupies a central place in Weber's thought, it does not appear in the first English translation of his Protestant Ethic by Talcott Parsons, published in 1930. On the relationship between socioeconomic conditions and ideas — the section where its absence will be spotted by later Weber scholars —, Parson's rendering reads:

> "In view of the tremendous confusion of interdependent influences between the *material basis*, the forms of social and political organization, and the *ideas* current in the time of the Reformation, we can only proceed by investigating whether and at what points certain *correlations* between forms of religious belief and practical ethics can be worked out." (Weber 2005: 49, emphasis added)

In the German original, the concept that Parsons translated as correlation[s][108] appears as *Wahlverwandtschaft[en]*. Parsons might have struggled with the translation of the German term, and by opting for "correlation", he had settled on a concept he thought to be closest to the original meaning. But it was not to be: literally, Verwandtschaft means relationship, while Wahl stands for election, selection or choice; in English, the sense of the term is best captured by elective affinities. The still prevailing confusion over the meaning of this concept has much to do with the influence of this first English translation. It was more than 70 years later that the term elective affinities first appeared in a new translation by Peter Baehr and Gordon Wells (Weber 2002), replacing Parson's "correlations". Not if this was the first time that the more accurate rendering had surfaced in the English-language scholarship on Weber: in their monograph titled *"Max Weber: Essays in Sociology"*, Hans Gerth and C. Wright Mills had

[108] Given the context in which this term was mostly used in the early 20th century, it can be argued that Parsons might have had in mind "*co*-relationships", that is, common or combined relationship — an understanding much closer to the concept of elective affinity. However, this does not change the fact that for the variable-centered approach, correlation refers to (incremental) variation, an interpretation in line with the econometric perspective.

already discussed elective affinity as "the decisive conception by which Weber relates ideas and interests" (Gerth and Mills 1946: 42). Nevertheless, the term had been absent from much of the English-language literature discussing one of Weber's seminal text for a long time after its first publication.[109]

Contemporary students of social science may wonder why such etymologizing is relevant at all. Beyond its literal meaning, what is designated by elective affinities? Why is it attracting an increasing awareness among Weber scholars, to the point that recently, there seems to be a resurgence of the debate on its sociological implications? Formulated carefully, the answer to this question will not only shed light on how and why Weber's original PE thesis "got lost in translation", but also help grapple with some of the most important theoretical issues in contemporary sociology. With regard to Inglehart's theses on value formation and value-induced economic change, it will also show the methodological pitfalls awaiting practitioners adopting the "variable-centered paradigm". In other words, the semantic differences between correlation and elective affinity are more than just an issue of hermeneutic sensibilities. It is instructive of Weber's ideas on the relationship between ideas (or values) and social phenomena that he never considered it as one of causation. While correlation implies a sense of causal sequence involving an independent and a dependent variable, the kind of relationship designated by elective affinities is irreducible to a sequential framework.

As a scientific concept, elective affinity came into use in chemistry during the second half of the 18th century. According to a dictionary edited by the Grimm Brothers (1854), its German form first appeared in a publication by Swedish chemist Torbern Bergman on the formation and decomposition of chemical compounds titled "De attractionibus electivus" (1785)[110]. Bergman's work in chemistry lay down the foundations of research into chemical reaction and decomposition; his achievements include the most detailed affinity table ever produced. Wahlverwandtschaft was introduced in conversational German thanks to the literary work of German writer and polymath Johann von Goethe. Weber scholars generally agree that Weber had most probably borrowed the concept from Goethe (Radkau 2009) whose work he used to cite in a number of his writings, including the Protestant Ethic. There

[109] At the same time, it did appear in the French translation (*affinités électives*), originally published in 1964 (Weber 1990).

[110] Wahlverwandtschaft was the German translator's neologism to render the meaning of the latin term "attractio electiva".

is also agreement that Goethe's metaphoric use of the term is embedded in his own adventures in physics and chemistry (Howe 1978; McKinnon 2010), and that it reflects an outlook that became established in the natural sciences.[111]

Less clear is its relevance to the social sciences, despite its centrality in Weber's work. In addition to the confusion over the translation of the term into other languages, including English, this unawareness is due to at least two other factors. One is that Weber never bothered to give an explicit definition of elective affinity. On the other hand, he did define the concept implicitly by discussing at length its sociological implications in writings related to the PE thesis. That his line of reasoning has been mostly ignored, can be explained by another peculiarity: what is conventionally known as The Protestant Ethic and the Spirit of Capitalism, "the book" was never a proper book, but two articles published in 1904 and '05, in the *Archiv für Sozialwissenschaft und Sozialpolitik*, and intended for debate. Therefore, for an elaboration on the main propositions of the PE thesis, readers have to turn to a series of four more articles that Weber wrote within the scope of the debate that his two earlier papers had provoked between 1907 and '10. These additional articles were published in the same journal but came to be relegated to insignificance (or at least overlooked) once Weber's body of work began to exert a wider influence. As a result, practitioners of sociology couching their arguments in what came to be accepted as Weber's views on the relationship between Protestantism and capitalism — but not familiar with the full line of reasoning published in no less than six articles — are likely to miss the central proposition in the full series. It is then not surprising that following several decades of little interest in these matters (Howe 1978; Parkin 1983; Thomas 1985), the resurgence of the debates on the actual propositions of the PE thesis (Löwy 2004; Chalcraft 2005; de Paula 2005, Runciman 2005; Treviño 2005; Carrier 2010; McKinnon 2010) came after both a revised English translation of the original two

[111] Starting in the second half of the 18th century, chemistry underwent a profound transformation, and its influence began to extend to the forums of the educated classes. Goethe used Wahlverwandtschaft as a metaphor for the formation and the breakup of romantic relationships in his eponymous novel, published in 1809. This roman, full of chemical allegories used as a description of the processes of attraction and repulsion, provides a detailed description of the logic designated by elective affinities. These intricacies are meant to illustrate the diverging affinities of various chemical elements. On the one hand, some elements (individuals) naturally attract each other even while being present in different compounds (couples): in each other's presence, these will be driven to form a new bond (couple), "no matter what". On the other hand, attraction between other elements occurs only in their free (that is, bondless, "single") state. Profound rearrangements — including unforeseen outcomes — may take place as a result of the reactions set in motion by the stronger affinities.

articles and the full exchange between Weber and his critics had been published in English (Chalcraft and Harrington 2001).[112]

Weber wrote his elaboration on the PE thesis as rejoinders (Weber 1907; 1908; 1910a; 1910b) to four articles by two critics of his original argument, Karl Fischer (1907; 1908) and Felix Rachfahl (1909; 1910). A common thread in the criticism addressed to Weber by these two authors is that they both regard the PE thesis as an idealist approach to explaining economic behavior. (In this respect, they share the views of those in the posterity who portray Weber as a proponent of the culturalist paradigm — but differ from the latter in their *rejection* of that approach.) In reply to those interpretations — while rebutting vehemently such "distortions" —, Weber gives a detailed presentation of the processes designated by the term elective affinity. In addition to stressing that the relationship between the Protestant ethic and the spirit of capitalism can be understood only by analyzing the macro-social outcomes of individual activity, he calls attention to the correspondence (Adäquanz) between *forms* of capitalist enterprise on the one hand, and a *methodical organization* of individual conduct, on the other. He goes to great lengths to emphasize that it would be wrong to appreciate this correspondence, "elective affinity" as a cause-to-effect relationship. There is neither cause, nor effect: forms of capitalist enterprise do not "stem from" any idea whatsoever, or vice versa.

In his reply to Rachfahl, Weber writes that "'ascetic' Protestantism [by its emphasis on vocation] has created for capitalism [that is, its logic] a corresponding 'soul', the soul of the 'man with a calling' who *does not need* the same means of feeling at one with his actions as the man of the Middle Ages" (1910a: 73, emphasis in the original). Later on, he argues that what came to be known as *modern* capitalism is born out of the elective affinity between the *form* (the forms of capitalist enterprise preexisting the Reformation) and the *spirit* (the capitalist mentality resulting from the interaction between Protestant asceticism and the "calling"). At this point, he insists that the spirit and the form may also exist independently of each other. An equally important proposition is that the historic form (the *early* capitalist enterprise as existing independently of the spirit) is not to be confused with *modern* capitalism. The form without the spirit is found in medieval Venice, Genoa and Florence; whereas the case study of Benjamin Franklin and his printing shop illustrates that the spirit can exist without the form. It is only in the "compound" called modern capitalism that these two elements are related — but their bond gives rise to qualities that neither of them has.

[112] The latter was not available in English before 2001.

Using the chemical analogy and in view of the exchanges between Weber and his critics, the roots of the misunderstanding surrounding Wahlverwandtschaft come to light. First, elective affinity is not about similarity but *sympathy* or *attraction*. Like in chemical reaction, in order for elements to attract each other, it is not necessary that they have similar properties. The only condition is to have complementary qualities. Dissimilarity between elements may turn out to be a factor that makes them "eligible" for attraction, hence reaction (the formation of bonds). Second, the logic of attraction invalidates any claim to "causation" by this or that element entering the reaction (or to causal relationship between the elements and the compound) as meaningless. The molecule called water is "caused" by neither hydrogen, nor oxygen — nor any "agent" whatsoever. Third, the properties of the compound (water, modern capitalism, etc.) resulting from the bond between the elements do not follow, and cannot be predicted from the properties of the elements (atoms in the case of water; form and spirit in the case of modern capitalism). The latter suggestion is a key proposition in the study of emergence — in fact, chemistry as we know it since the 18th century has been a science of emergent properties (Luisi 2002).[113]

Retaining the chemical terminology with regard to the compound called modern capitalism, the elective affinity between the elements gives rise to two separate reactions (McKinnon: 2010). (1) The first is the reaction between the ethic of the calling and the asceticism of certain Protestant factions. The resulting compound is the spirit of capitalism with its own qualities that are irreducible to the properties of either element. Put differently, the properties of the elements entering into reaction with each other are not extrapolated to the compound. The spirit of capitalism is not ascetic in the Protestant sense, since it does not value asceticism on its other-worldly merits. Nor is it an ethic of the calling, since the religious justifications of doing one's job well are played down. (2) The second reaction occurs as a result of the attraction between *this* emergent mindset and the various forms of capitalist enterprise that had preexisted the Reformation. From this reaction emerges modern capitalism.[114]

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[113] "(T)he emergence of the novel entity water obliges the two components to a relatedness (chemical bonding and the corresponding mixing of the electronic orbitals) that profoundly affects the properties of both hydrogen and oxygen. […] (T)he chemical properties of H and O bound to each other in the water molecules have nothing to do with the physical properties of the free gases." (Luisi 2002: 196)

[114] In most instances when it appears in Weber's PE articles, the concept of emergence merely denotes "occurrence" without implying non-deductible properties. In other formulations, however, it includes

What transpires from the above is that currently influent ascriptions of a "causal chain", a "path model" or "superposition" regarding the manner in which variables interact miss the core proposition of the PE thesis. Weber's thesis is not "culturalist" any more than it is "structuralist". Indeed, addressing Rachfahl's repeated insistence on an idealist reading of his thesis, Weber makes the remark that such an understanding would be just as worthless as a materialist interpretation:

> "I […] stated explicitly the truism that religious–psychological factors were only able to foster capitalist development directly in the context of numerous other, especially natural-geographic, 'conditions'. Finally, […] I again made clear as early as 1908 – in order to preclude *every* 'absolutisation' of the causal constellation I discussed – that my studies analyse *exclusively* the development of an ethical 'lifestyle' adequate to the emergent capitalism of modern times. If, therefore, others have 'overestimated the scope of my discussion', this is not my fault. I added that after finishing my essays I could quite possibly be accused of 'capitulating to historical materialism'."[115] (Weber 1910b: 95, emphasis in the original)

Notice Weber's use of the adjective "adequate" in the above quote. In this context, it serves to make it clear that he does not prioritize this or that component of human conduct in the explanation of social phenomena. Adequacy simply stands for correspondence between two items whose mutual attraction does not mean causal sequence. With regard to the logic of reaction, Weber argues that it is impossible to isolate a "trigger" among the elements constituting the complex set of relations in which modern capitalism is embedded. But even this more cautious formulation can be misleading if the concept of embeddedness serves to reify modern capitalism as a "substance", existing in a form that is somehow demarcated from the very relations of which it is (nothing but) the label. The most important proposition that Weber is trying to "get out" over the course of his debates with Fischer and Rachfahl is that it

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unequivocal reference to such properties, in line with the concept of elective affinity: e.g., "emergence of 'methodical conduct' of life" (1908: 50), "the emergence of the 'capitalist' spirit" (1910a: 82).

[115] Regarding the materialist (and less known) misreading of the PE thesis, Weber's prediction proved accurate in light of engagement with his work in the writings of Anthony Giddens (1970), the Weber scholar Frank Parkin (1983) or Gerth and Mills (1946). For these authors, elective affinity is no more than the *superposition* of ideas on (material) "interests" — in line with what influential currents of Marxism regard as ideological justifications (superstructure) of the dominant mode of production.

is empirically implausible to assume that constituents of emergent qualities "impact" one another in the sense of a causal sequence — or that the emergent quality exists "on its own", independently of the "bonds". More to the point, it is only based on a superficial reading of his original two articles (and unfamiliarity with the whole PE series) that Weber could be credited with dissociating "economic" and "cultural" aspects:

> "As far as the opportunity allowed, I have indicated elsewhere […] how the emergence of 'homo oeconomicus' was limited by quite definite *objective* conditions, and that it was these conditions — geographical, political, social and other — that *limited* the culture of the Middle Ages, in contrast to antiquity." (Weber 1910b: 131, emphasis added)

In sum, Weber's PE thesis not only did not hold an idealist view of the processes leading to the rise of modern capitalism, but defined itself against such an approach. What in their critique of GIL's endogenous growth model Jackmann and Miller (1996b) call the "ritual invocation of Weber's argument about Protestantism" is misleading: what Weber set out to explain was not how whatever spirit "gave rise" to a new economic order, but rather how specific mental dispositions formed in a given socioeconomic context turned out to be *adequate* for already existing forms of capitalist enterprise.[116]

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[116] While the actual and largely overlooked propositions of Weber's Protestant ethic thesis cannot be reconciled with their substantialist reading, other aspects of his sociology of religion do show substantialist influences.

On Islam, Weber's approach (1965) was dominated by an almost exclusive focus on the Middle East to the neglect of South-East Asia and Africa. His central claim that the spread of Islam was mainly the result of military conquest (a proposition adopted in much of culturalist literature stressing the inherently "violent" character of the Islamic creed) stems from this one-sided focus. However, outside the Middle East, Islam spread mainly as a result of a peaceful evolution facilitated by charismatic individuals, itinerant traders and preachers (B. S. Turner 2010a, 2010b; Grandin 2014).

With regard to Hinduism, Weber suggested that its effects on the economy were negative (1958). In this respect, he followed the dominant Euro-centric interpretation which attributed India's caste system to an intrinsic Hindu element. This, however is untenable in light of the fact that Hindu scriptures do not endorse discrimination based on caste, and within Indian society, the caste system existed also among Christians, Sikhs, and Muslims (Mehta 2006). On the other hand, caste played "an important role in the organization of trade among geographically extended kin groups" (Bayly 1978: 185).

3.3. Bourdieu's theses on symbolic power

The previous section has attempted to outline how a school of thought informed, among others, by a misreading of Weber fails to recognize the embeddedness of mental representations ("culture", "ideas", "values", etc.) in the context of agency in general and material production in particular. The substantialist perspective that, in value research, has developed into a dominant practice has adopted what Weber would call a doctrinaire derivative of his PE thesis. A compelling argument with this perspective has to point out that the opposition between symbolic and material aspects of agency is scholarly, not empirical. From the field analytical perspective, a critique of Inglehart's theses has to build on the philosophical tradition that defines its inquiry against this opposition. To that effect, Bourdieu's work on symbolic power is the toolkit of choice, since it constitutes the most coherent sociological refutation of this opposition. If the enduring relevance of Weber's Protestant ethic thesis to the sociology of values is beyond dispute, the same should be said of Bourdieu's theses on symbolic power. This consideration also includes Bourdieu as a *practitioner*: his theses reviewed below are supported by empirical work. Bourdieu's studies of symbolic power also provide clues for the recognition of Weber's overlooked contribution to the sociology of values.

A consistent thread in Bourdieu's work is the deconstruction of all human transactions as *inextricably both material and symbolic*. In this respect, his work builds on

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[continued from previous page] He also failed to recognize how "worldly" interpretations came to accommodate Buddhism and Confucianism with an emerging trading economy. Buddhism was not antithetical to economic growth since it "neither condemns, nor advocates the acquisition of wealth, condemning only attachment to wealth" (Whelan 2006: 236) — displaying a stance that is not at odds with the outlook that Weber attributed to ascetic Protestantism. The egalitarian outlook of historic Buddhism made this creed appealing to a merchant class striving to break away from archaic forms of domination, but also kings eager to consolidate their rule by relying on a doctrine condemning power struggles between competing groups (Darian 1977). Rational business organization — highly developed long-distance trading networks, contracts, complex property arrangements, mass production, etc. — was a no less important catalyst of the emergence of the Chinese empire. In this respect, rather than "downgrading the market" (Weller 2006), Confucianism played an important role. The same conclusion is echoed in Wallerstein (1975) with the proposition that rationality and advanced bureaucracy were not only present in Islamdom and China but constituted the wherewithal for holding together the vast empires that these civilizations comprised. As the economic surplus had to be directed toward administering giant state apparatuses, it was not the lack but the supremacy of rational organization that hindered capital accumulation.

phenomenological, existentialist and pragmatist perspectives that dismiss the spirit/matter dichotomy as empirically meaningless: consciousness is the consciousness of *something* (Husserl 1960), to be a human being is *inhabiting*, being "thrown" into concrete situations in space and time, performing specific actions (Heidegger 2008); thinking can be grasped in the act of this *dwelling* (Heidegger 2004), that is, in the context of agency, as an attempt at *solving practical problems* that the subject encounters in the course of action (Dewey 1896). Most significant from the sociological perspective is Mead's social behaviorism (Mead 1934) because it reproduces the major insights of field theory by demonstrating that consciousness is not a substantive entity (a "thing") but a *relational* phenomenon, a ("process") emerging from a creative engagement with the world. The sophisticated human nervous system is a necessary but not sufficient condition for the emergence of consciousness: role-taking via the significant symbol is activated in a social context. In other words, thinking is always related to doing, in the sense of representing things that get done or are doable "out there". This proposition is a cornerstone of the anthropological inquiry of Mauss and Durkheim, especially on the practices of classification (Durkheim and Mauss 1963; Durkheim 2001) that informed the structuralist school of Lévi-Strauss (1963) and Bourdieu's own formulation of field theory. Sociology, as practiced in this school "conceptualize[s] the self not as a metaphysical substance or entity, such as the 'soul' or 'will' […], but rather as a dialogical structure, itself thoroughly relational" (Emirbayer and Mische 1998: 974).

Because the inquiry into symbolic power is the foundation of Bourdieusian sociology, it is preferable, for the purpose of this rough sketch to consider those chapters of his work — on speech acts (1991), cultural consumption (1984), the logic of practice (1990), practical reason (1998), and economic reason (2000b) — that lay out the principles that constitute the building blocks of this critique of the substantialist perspective in value research. The instrumentality of symbolic acts is presented with regard to three aspects: (1) the performative/ritualistic, (2) the corporal, and (3) the efforts at denial.

3.3.1. Rituals

Bourdieu's theory of language (1991) is built on a criticism of what he calls "pure linguistic theory". He argues that an idealist streak in Saussure's approach has continued influence among linguists thanks notably to Chomsky's work on universal grammar. While he does not dispute the relevance of formalized linguistic inquiry — in particular, he

acknowledges the significance of Saussure's structuralist analysis demonstrating that meaning can only be grasped via the relationality of signs —, he takes issue with what he sees as its implausible abstractions. Bourdieu's focus is *discourses*, that is, actual speech acts as they are produced and circulate on linguistic *markets* — as opposed to "language" which he sees as a meaningless theoretical construction. In his view, Saussurian and Chomskyan linguistics fails to notice that the "set of rules" identified as intrinsic to various languages is instituted by force and therefore contingent on power relations. In itself, a speech act is not correct or incorrect: what is conventionally understood as "correct" usage is simply the correct (because correct*ed*) *execution* of the modus operandi instituted as legitimate form of expression. Conformity exists and can be studied with reference to *that* code, not some theoretical benchmark.

Expressions, speech acts, discourses constitute *dialects* whose deviations from the one dialect instituted as the legitimate form of expression determines their respective prices on a given linguistic market. The larger the deviation, the lower its social value — that is, the profits accruing to the speakers of the dialect in question. The authority of elite dialects is inseparable from the aspect of coercion: not only in the sense of being instituted as the correct forms of expression, but also thanks to the huge energies invested in the *correction* of the execution, and the downgrading of other forms of expression. This, in a nutshell, is what constitutes *symbolic violence*.

Speech acts — in fact, all symbolic acts, including cultural consumption or consumer behavior overall (1984) — *are performances or rituals*: this is a point where Bourdieu relies heavily on Austin's work (1962) on the performative aspects of language use. Describing a state of affairs (locution) is not the only function of speech acts: there is a specific category of utterances confined to ways of *acting* (illocutions) without descriptive value. These have to do with constituting a new state of affairs by performing a ritual. Illocutionary force — on which the success of these rituals depends — stems from the social relations of the actors in interaction. This draws attention to the issue of authority/authorization: the same utterance (in purely literal terms) that has as its consequence the successful execution of an act (like inaugurating a building) may be ineffectual if uttered by an actor lacking the required authorization to perform the act. Bourdieu expands on Austin's reasoning by pointing out that rather than being confined to particular circumstances, performative speech acts constitute the "default setting" of utterances, and it is purely descriptive (locutionary) language use — devoid of any performative function — that is exceptional. It follows that the primary function of *actual* language use is not to communicate but to execute actions. Being first and

foremost executions of — or, in any case, attempts *at* executing — acts, *utterances are tools deployed with the purpose of acting upon the material world*, modifying existing relations, creating new conditions, etc.

3.3.2. Bodily hexis

Another important aspect is that *speech acts are intimately tied up in bodily expressions*, written forms being no exception. Linguistic habitus is bodily *hexis*: since "(l)anguage is a body technique in which one's whole relation to the social world, and one's whole socially informed relation to the world are expressed", (Bourdieu 1991: 86). Rather than merely involving posture and movements, linguistic practices *are* posture and movements. The materiality of symbolic expressions involves not only accent (its most obvious manifestation), but also bearing, gait, and all manners of mostly unconscious bodily performance expressing one's relation to the physicality of life. Bourdieu argues that bodily hexis is not mere externalization of "thought", as implied in substantialist approaches to non-verbal communication. In addition to conveying meaning, it is itself meaning in the full sense, as follows from the performativity postulate. The most straightforward association between language use and bodily hexis concerns the relationship to the mouth and the things that can be done with it: the way people speak, particularly their accent is intimately related to the way they eat.

Related to bodily hexis is the more comprehensive Bourdieusian concept of habitus: a set of durable dispositions that constitute a generative principle of action and perception (Bourdieu 1990). Habitus is a historical, therefore conditioned product, yet showing remarkable stability and, in consequence, predictability. Although acquired during the course of socialization, it is "immune" to willful manipulation: being largely unconscious, it has become "second nature". Being embedded in the field, habitus reflects the properties of the field relative to the specific position occupied by the actor. This is to say that mental structures and field structure are isomorphic. Being a space of struggle, the field evolves constantly thanks to the dynamics of the opposition between orthodox and heterodox habitus, corresponding to a tension between the dominants and their challengers. However, heterodoxy requires the recognition of the principles of domination, a job of deconstruction which varies in difficulty proportional to the effectiveness of symbolic violence. Accordingly,

the majority of the dominated will subscribe to allodoxia, a code of conduct built on the misapprehension of the real stakes. This bestows stability on the field.

A fundamental aspect of the relation between bodily hexis, habitus and field is how people relate to *interest*. Interest is understood as the profit realized from the execution of action: it is both a material referent and a symbolic profit motive. Given the importance of bodily hexis in one's relation to the world, interest in the material sense is tied to the satisfaction of physical needs, bodily pleasure, sensory stimulation. All actors *strive toward* interest defined as a material thing — but this striving is not identical with what neoclassical economics assumes to be a profit motive. The latter defines the profit motive with reference to a *universal* concept of utility. Interest, as bound up with habitus, is not compatible with such a definition, because its realization entails different symbolic profits.

3.3.3. Denial

Actors invest energies proportional to their social status into disguising the materiality of their acts. A major contribution of *Distinction* (1984) is the demonstration that the judgment of taste, by articulating these different symbolic profits in schemes of appreciation and consumption, reproduce one's relation to the world. Taste and linguistic habitus are "operational" equivalents — in fact, linguistic habitus is objectified taste — in that they express how actors relate to the materiality of their actions and of their own existence. Highly formalized utterances, evident especially in the use of superfluous phraseology (an excess of adverbs in particular) fulfill the same role as any sophisticated set of eating utensils: creating a distance between the materiality of the act (eating, gaining favors, competing for power, committing atrocities, etc.) and the person executing the act. As with language use, taste articulates the distance taken from the things of the material world: the refinement of the elites contrasts with the open enjoyment or sensuality of the popular sectors. The degree to which schemes of appreciation and acts of consumption are formalized is proportional to the effort invested in denial.

In statistical formalization, the opposition between embracement and denial of material interest is captured by the *composition of capital* in correspondence analyses of taste (1984: 262, 340): at one end, it is economic capital (embracement); at the other, cultural capital (denial) that is dominant. Moreover, this dimension accounts for most of the variation of taste, which means that the related opposition is the chief discriminating dimension among the

cultural practices of the different classes. Regardless of the *total* volume of capital (which varies considerably across the class structure), similar positions along this axis correspond to similar relations to material interest.

Taste is always distaste: opting for any object or practice implies rejection of — and repulsion toward — other objects and practices seen as inimical to the posture involved in the preferred act of consumption/practice. In the case of the elites, the sociological function of the "disgust at the facile" is the expression of one's distance from all objects, acts and, equally important, groups of people deemed to represent the vulgarity of the flesh, the "surrender to immediate sensation" (1984: 486). Among the popular classes, the rejection of the highly formalized mannerisms of the legitimate culture develops from a profound unease related to the difficulties at their decoding, combined with a suspicion of hypocrisy on behalf of its representatives. In both instances, taste and distaste are visceral: actors relate to objects and practices in ways that seem natural (with a referent in physical reality) and exclude accommodation with what is being rejected.[117]

The apparently gratuitous, spiritual pleasures associated with the consumption of legitimate culture fulfill a profoundly instrumental role: "'(e)mpirical' interest enters into the composition of the most disinterested pleasures of pure taste, because *the principle of the pleasure derived from these refined games for refined players lies, in the last analysis, in the denied experience of a social relationship of membership and exclusion*" (1984: 499, emphasis added). In other words: the denial of material interest through various seemingly disinterested practices exercises its disciplining power precisely because the principles of denial are invisible. The symbolical component of highly distinctive cultural practices has a physical imperative in maintaining and reproducing the existing social order.

Transactions in precapitalist[118] — but also, to a large extent, in modern capitalist — economies are based on the denial (repression) of economic interests: the material stakes of

[117] In his outline of these ideal types, Bourdieu draws heavily on the aesthetic theory formulated in Kant's *Critique of Judgment* (1952). What Kant regards as the universal standards of beauty are, in empirical terms, the efforts invested in the rejection of the objects, thoughts, practices representing "impure desires". Purity means detachment from, elevation above material interest: one's humanity is proportional to the distance taken from the impurity of the matter. Objects of consumption and practices are admitted to the legitimate culture to the extent that they can be turned to the service of denial of material interest: of the material interest in the act of consuming/doing them, and of the consumer/practitioner.

[118] Bourdieu's theses on symbolic power originate in the ethnological surveys that he had conducted in Kabylia (2000a) in the 1960s.

the transaction, including the obligations of the participants are not explicitly defined. This requires equivocal strategies and behaviors, which will disguise the contradictions between the objective and subjective truth of the transaction. The success of denial depends on the orchestration of habitus (in plural) of all involved around the shared miscrecognition of the stakes. An extreme example is the exchange of gifts whose function is to create obligations (proportional to the value of the gift) — a deeply economic rationale, but whose objective truth is suppressed by the acts of denial identified in the temporal interval between the gift and the countergift, as well as the collective representations surrounding the exchange. Bourdieu's last major study (2000b) finds the same archaic logic at work in late capitalist residential real estate markets where most individual buyers are "duped" by the concerted effort of government policies, marketing professionals, peer pressure and their own quest for social status into financing schemes where they are unaware of the real stakes and their own prospects.[119]

The logic of transactions in a capitalist economy are *supposed* to constitute the opposite of archaic economies built on symbolic alchemy: the material stakes are overtly declared; the obligations of the participants explicitly and unequivocally defined; the subjective truth of the transaction corresponds with the objective truth — properties that are consonant with the standard assumptions of neoclassical economics. What therefore Bourdieu's study of markets, as well as other major empirical studies in economic sociology (e.g., Akerlof 1982; Uzzi 1997; Gneezy and Rustichini 2000; Richard 2003; Gintis 2005) indicate is not simply the systematic violation of these assumptions but also the persistence of archaic organizing principles in modern capitalism.

To sum up, the significance of Bourdieu's theses on symbolic power lies in the most consistent translation of *relational theories of practice* into research with specific regard to the symbolic and material forms of agency. Most relevant to this discussion is his empirical elaboration on the anthropology of Durkheim and Mauss. Mauss's detailed studies of corporal techniques (Mauss 1936), magical rituals (Hubert and Mauss 1902) and the exchange of gifts (Mauss 1923) explain the apparently most banal instrumental acts with reference to a whole system of collectively organized representations — insights that are paramount in Bourdieu's approach to the study of practical reason. The same can be said of Bourdieu's adoption of the

[119] Written in the late 1990s, this study lays out, with eerie prescience, all the major ingredients of the late 2000s financial crisis that leading scholars (e.g., Posner 2009; Harvey 2010; Stiglitz 2010a, 2010b) have since exposed retrospectively.

core argument in Durkheim's sociology of religion (Durkheim 2001), which links the emergence of collective and individual conscience to the dissociation of the profane from the sacred in the religious ritual — an early sociological proposition that cognition is relational. Moreover, by identifying the profane with the activities (and also time and space) related to *material* reproduction, and the sacred with the collective effort at representing an opposition to, a *detachment from* those activities — and by positing that sacred versus profane constitute the definitive categorization —, Durkheim's theory of religion defines mental operations with reference to instrumental action.[120] Bourdieu's studies on the *transfiguration* of material interests via speech acts, consumption — and more generally, any ritual — captures this same mental operation whose sociological function is the production of *salvation*. Bourdieu's merit is the empirical validation of this logic of practice beyond the boundaries of religion — but the theory was spelled out in Durkheim's work.

3.4. Values as vocabularies to navigate fields

At this point, it is important not to lose sight of the interest of couching a critique of substantialist reason in value research in Bourdieu's theses on symbolic power. An appreciation in line with substantialist thinking would gather that what Bourdieu is talking about is how representations (a) "arise" out of or (b) "get translated into" into objective relations — or (a+b) "both". The first would be the materialist, the second the idealist interpretation. Both (a) and (b) — or considering (a+b) as a further option, all three — miss the point because these are substantialist approaches to a phenomenon that is relational. Bourdieu's field theory implies no causal sequence between the material and symbolic aspects (or variables) of agency. Indicative is (almost) always imperative,[121] symbolic profit is always material profit — otherwise it would be unthinkable —, reason is never "pure" (disinterested) but always practical (interested). As in the pragmatist philosophical tradition, "cultural" is

[120] "The man who has submitted himself to its prescribed interdictions is not the same afterwards as he was before. Before, he was an ordinary being who, for this reason, had to keep at a distance from the religious forces. Afterwards, he is on a more equal footing with them; he has approached the sacred by the very act of leaving the profane; he has purified and sanctified himself by the very act of detaching himself from the base and trivial matters that debased his nature." (Durkheim 2001: 309)

[121] Strictly formalized ("mathematical") language use restricted to transmitting information being the exception (Bourdieu 1991).

never dissociated from "structural", *mental representation always stems from agency, and symbolic practices are always, simultaneously instrumental practices, physical in their origins as well as their consequences*. This perspective recalls Mills' caution:

> "Motives are of no value apart from the *delimited social situations* for which they are the appropriate vocabularies. […] Rather than interpreting actions and language as external manifestations of subjective and deeper lying elements in individuals, the research task is the *locating* of particular types of action within typal frames of normative actions and socially situated clusters of motive." (Mills 1940: 913, emphasis added)

This brings us back to Weber's Protestant ethic thesis. We have left this discussion by arguing that it is not the idealist/culturalist theory that is suggested by its dominant interpretation. Having outlined the substantialist paradigm in value research in opposition to field theory, the question of how to locate the PE thesis within this frame of reference has to be addressed. In light of the preceding discussion, the argument presented in the full PE series leaves little doubt. Even after a reconstruction of the PE thesis, it is striking how close this formulation comes to Bourdieu's concept of field and habitus. Weber not only used "adequacy" (Adäquanz), a synonym for correspondence, but emphasized the correspondence between ascetic Protestantism and capitalism. The development of spiritual forms is therefore constrained by the objective conditions of the existing social order. The thesis of elective affinity can not only be "accommodated with", but is a sociological formulation of the emergence postulate, and is thus compatible with the methodological holism of the Durkheimian tradition.[122] Materiality and symbolism are intertwined, as in the field theory perspective on culture.

Accordingly, it is difficult not to suggest that Weber's PE thesis is a sociological precursor of field theory — an influence that Bourdieu had made explicit.[123] It is thanks to

[122] Notice that the methodological individualist criticism of this perspective ascribes a substantialist approach to this tradition by overlooking that "it is not the influence of a macro-*property* itself, but of that which gives rise to the macro-property, viz., the new *relatedness* of the parts'" (Schröder: 447, emphasis added) that influences the behavior of the parts.

[123] "[M]y reading of Max Weber - who, far from opposing Marx, as is generally thought, with a spiritualist theory of history, in fact *carries the materialist mode of thought into areas which Marxist materialism effectively abandons to spiritualism* - helped me greatly in arriving at this kind of generalized

this convergence that the work of Weber deserves to be integrated in the criticism of substantialist reason.[124] It is only owing to its most influential interpretations — but despite Weber's extreme care in grappling with the complexity of the subject — that his PE thesis would end up canonized as a substantialist inquiry. Absent its substantialist misappropriation, the PE thesis would have probably long been integrated into field theory.

By claiming that "cultural values have an enduring and *autonomous* influence on society" (Inglehart and Welzel 2005: 48, emphasis added) Inglehart disregards the actual legacy of the PE thesis, as well as Mills' warning that "[t]o simplify these vocabularies of motive into a socially abstracted terminology is to destroy the legitimate use of motive in the explanation of social actions" (Mills 1940: 913). Careful reading of Inglehart's writings suggests that this indifference is reflexive rather than willful, as his definitions of culture at times include references to the materiality of representations: "beliefs, values, knowledge, and skills that have been *internalized* by the people of a given society, complementing their external systems of coercion and exchange" (1997: 15, emphasis in the original). However, the implications of this latter, sensible formulation remain unpacked as Inglehart's inquiry has not departed from the norm-based, self-actionist, and the variable-centered, inter-actionist subclasses of substantialist thinking. The attribution of generative capacities to specific cultural values is in line with the former, the postulate of cultural shifts triggered by rising affluence with the latter variant.

None of these accounts grasps how values are embedded in the socio-economic context. Social contexts are fields where structure and agency, material ("economic") and symbolic ("cultural") are bound together in ways irreducible to a "dominant effect" or causality.[125]

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materialism; this will be a paradox only to those who have an over-simple view of Weber's thought, owing to the combined effect of the rarity of translations, the one-sidedness of the early French and American interpretations, and the perfunctory anathemas pronounced by 'Marxist' orthodoxy." (Bourdieu 1990: 17, emphasis added)

[124] Parsons' action-system requisite (AGIL) model relies on insights similar to the Weberian understanding of elective affinity in the sense that none of the four subsystems is purely spiritual or instrumental/material (Alexander 1987). In addition to Parsons's difficult prose, it is probably unfamiliarity with the PE essays in their entirety that can partly explain why the Weberian roots of AGIL are not recognized on their merits (that is, in the sense discussed in this chapter). Treviño claims that "it is precisely elective affinity requisite analysis that is now needed to fine-tune Parsons's AGIL model and make it more consonant with Weber's approach to social action" (2005: 341).

[125] In a study combining conceptual analysis with and empirical study regarding the culture-economy dialectic, Brons points out that "(t)here are no (objectively limited) counterparts of 'culture' and 'economy' in

Bourdieu's studies on symbolic power indicate that values — like mental representations in general — are part of habitus. Applied to our case study, this means that values should be treated as integral to agency, ("in situ"), and not as a priori referential standards or superposed justifications. In this respect, Schwartz's definition of values as "normative emphases that *underlie* and *justify* the functioning of social institutions" (2011: 314, emphasis added) — where the terms "underlie" and "justify" capture, in accordance with the concepts of elective affinity and habitus, both their materiality and symbolism, as well as their transsituational character —, is compatible with the relational approach taken in this study.[126] The reengagement with Weber's PE thesis suggests a promising perspective in the sociology of values, provided it is in accordance with the approach outlined with reference to the concept of elective affinity — which is to say that to apply Weber's actual insights from the PE thesis to value research, one should consult Bourdieu.

The empirical analyses presented in Chapters 1 and 2 as part of a critique of Inglehart's theses have highlighted possible strategies. Nonetheless, as their focus is the ecological, not the individual level (reflecting the limitations of cross-cultural comparisons due to construct incongruence), they provide little if any clues as to the embeddedness of values in agency. A relational sociology of values will have to tackle that latter issue — probably by abandoning cross-cultural comparisons since, at the current stage, these are difficult to carry out at the individual level. With this limitation in mind, I conclude by highlighting a direction that attempts to link the study of values at the individual level with a field analysis of symbolic forms.

3.4.1. Construct incongruence reformulated as signal of field effect

In Chapter 1, we have seen how ignoring the structural variance of cultural values has led Inglehart to construct summary indicators that in a significant number of nations do not measure the same phenomenon. The field theoretical perspective helps reformulate the problems related to structural equivalence by expounding implications that are of secondary interest — or sidestepped altogether — in the current literature. The rationale for addressing these concerns again is not simply to restate the same problem in field analytical terminology:

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reality" (2005: 339) and that "[e]mpirical research that insufficiently takes this into account can only produce trivial results" (ibid.: 338).

[126] Notwithstanding, Schwartz's work focuses first and foremost on internal construct consistency and not on how values are embedded in agency.

there is more to the imperative of structural invariance than the issues discussed so far. I illustrate this with reference to an important limitation of the value constructs proposed in this study as alternatives to Inglehart's scales.

Since the cultural emphases that latent constructs purport to capture are relational, the researcher has to fine-tune the method of inquiry to account for this flexibility. The insights from field analysis suggest that even constructs whose structural invariance has been established — including the measures of religiosity and authoritarianism proposed in this study — may be of limited empirical relevance. This is because while it can be demonstrated that *what they do capture* has reasonably invariant meaning across the subsets (nations) studied, this invariant structure *might still not account fully for the underlying phenomenon*. Compared with Inglehart's secular-traditional and self-expression-survival scales, my alternative constructs differ not only in content but also in being restricted to nations where they express the same value oppositions.

With regard to authoritarianism, we have to recognize that there are aspects of authoritarianism that are certainly not captured by the measure introduced in Chapter 1 — especially in the case of the economically most developed countries. This is because of the "changing face" of authoritarianism. Authoritarianism, defined in Chapter 1 as uncritical reliance on/acceptance of coercion (regardless of source, medium, beliefs or actual practices) includes — following the logic of domination that constitutes the gist of Bourdieu's theoretical legacy — the ascription of *immutable substances* to groups of people with the purpose of defining them in terms of intrinsic worth that ranges from backward (vulgar) to sophisticated (spiritual).

My indicator of authoritarianism seems to fit a *traditional* formulation (rejection of outgroups, oppressive gender roles, restraints on the freedom of speech, resentment of political subversion) — but this does not mean that those who, by these standards, qualify as libertarian are indeed non-authoritarian in contexts where authoritarianism has *other* carriers. Noting that the elites have traditionally constituted the avant-garde of ethical innovation, Bourdieu finds evidence in surveys that the higher classes have a tendency to reject the "aristocratic stiffness" of "older" elites in favor of a relaxed and increasingly liberal stance in matters related to *domestic* morality (especially gender roles). Yet he also warns that these signs should not be read as evidence of a shift to lesser *actual* authoritarianism because a "new mode of domination, based on 'velvet glove' methods, at school, in church or in industry" (Bourdieu 1984: 311) is being adopted: a progression toward even more

euphemisms with an increasingly sophisticated — and, by implication, less visible — immunization of elite privileges as a consequence. The elites may gradually shift to liberal or libertarian positions in matters that are becoming secondary or insignificant to the exercise of power because the levers of social control have also shifted — from more "tangible" to less visible means of coercion. However, they will retain the authoritarian outlook in matters perceived as central to the social order and remain intolerant of what they see as challenges to their domination.[127] Foucault's seminal work (1975) on the increasing sophistication of surveillance techniques in modern societies is of valuable guidance — because fully compatible with the relational perspective. Bourdieu's studies on the evolution of the linguistic market and his anatomy of cultural consumption give a comprehensive account of these processes with regard to symbolic dominance.[128]

Three of the four items composing the authoritarianism scale in this study tap the "old school" variant of authoritarianism, and are therefore inadequate for measuring the more sophisticated variant that Bourdieu describes.[129] This means that the shift toward libertarian values in Western societies (where the newer variant is likely to be more significant, even if restricted to the higher strata) might be less pronounced than is measured by that indicator. Studies involving more detailed indicators are required to capture these phenomena in their complexity.

The same caution is in order regarding the definition of materialism — one of the most controversial aspects of Inglehart's approach to value measurement. The criticism reviewed in Chapter 1 has pointed out that the Postmaterialism Index conflates the authoritarian-libertarian dimension with actual materialism, which is defined as the preference for material gain against other forms of "compensation". But the anthropological weaknesses of the

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[127] "It should scarcely be necessary to point out that if the members of the dominant class are more 'innovating' in domestic morality but more 'conservative' in the area more widely regarded as 'political', i.e., in everything concerned with the economic and political order and with class relations (as shown by their answers on strikes, unions etc.), this is because their propensity to adopt 'innovating' or 'revolutionary' positions varies in inverse ratio with the degree to which the changes in question affect the basis of *their* privilege." (Bourdieu 1984: 432, emphasis added)

[128] Moreover, the production of intellectual discourses, including the knowledge produced by value research, is part of this process.

[129] It is not unlikely that some "new school" authoritarians would even be in favor of — or not opposed to — at least one of the three actions included in the set which measures acceptance or rejection of subversive actions (see Table 15 in Appendix 2).

postmaterialism thesis remain even after the core thesis has been saved from this conflation. The fallacy of extrapolating Maslowian needs theory to the study of values can be grasped by recognizing the various field effects shaping actors' relation to material gain. Owing to its variable-centered approach and one-sided focus on scarcity, Inglehart's postmaterialism thesis posits that once a threshold of relative affluence is reached (beyond which "survival is taken for granted" (Inglehart and Baker 2000: 26), preoccupation with "money and stuff" will subside:

> "The shift from Modernization to Postmodernization reflects the diminishing marginal utility of economic determinism: economic factors tend to play a decisive role under conditions of economic scarcity, but as scarcity diminishes, other factors shape society to an increasing degree." (Inglehart 1997: 59)

One could hardly find a better illustration of the *inter*-actional subclass of substantialist thinking in value research: it is variable properties or levels of separate entities that "cause" things, not actors. Against this assumption, the heterodox tradition that, in many respects, is compatible with the field theory perspective on values takes a relational view. In addition to Veblen (2007), the authors referenced in connection with the criticism of neoclassical growth models, Polanyi,[130] Galbraith, Baran and Sweezy have argued that the imperative of material accumulation has always included an expressive function. Therefore, far from subsiding among the affluent sectors (or in an overall affluent society), it merely manifests itself in different, more sophisticated forms — to the point of being unrecognizable thanks to the energies invested in wasteful consumption and sophisticated rituals. Bourdieu's *Distinction* provides an empirical corroboration of this thesis: higher positions in the social hierarchy correspond to increased investment in wasteful consumption and apparently futile, disinterested activities, whose function is to deny one's own and repudiate others' materialism.[131] But this does not mean that the affluent sectors are less materialistic:

[130] "[Man] does not act so as to safeguard his individual interest in the possession of material goods; he acts so as to safeguard his *social standing*, his social claims, his social assets. *He values material goods only in so far as they serve this end.* Neither the process of production nor that of distribution is linked to specific economic interests attached to the possession of goods; but every single step in that process is geared to a number of social interests which eventually ensure that the required step be taken." (Polanyi 2001: 48, emphasis added)

[131] The Veblenite influences are obvious, although seldom expounded in Bourdieu's writings.

obviously, such a lifestyle cannot be sustained at lower income levels. Subject to the relative position in the field, material interest is expressed in many different forms.

A fine-tuning of the measurement apparatus is needed to account for this tendency to euphemize the same underlying drive ("maximizing pecuniary gains"). The equivalence issues call for an adaptation of our survey designs to the requirements of a relational analysis of values. Given the specificity of the local (national) contexts, what such a study will gain in depth will likely lose in breadth due to increased cross-cultural construct variance. The religiosity and authoritarianism measures presented in this study — like any other, cross-culturally comparable latent construct — are inadequate in this regard. Their parsimony means greater comparability, but at the price of a loss in sophistication.

3.4.2. Subjective versus objective truth

If the preceding admonitions sound alarming, there is a further difficulty that a sociology of values adopting the field theory perspective will have to consider. This is a *caution against attributing too much theoretical importance to values*. From the field analysis perspective, the more carefully the researcher goes about detecting the structure of those representations that (a) fit Schwartz's practical definition of values ("normative emphases that underlie and justify the functioning of social institutions") and (b) capture all significant aspects of the specific values considered, the closer the resulting construct(s) will be not to "the value(s)" but to the gravitational principle around which the field (including the values) is organized. The following quote from Martin states this dilemma unequivocally:

> "[F]ield theorists assume that *the field is defined by certain common primary motivations* — subjective representations of 'what is good to strive for' […] — and organizes other ones. This conception differs from standard ideas of values (ultimate or penultimate conceptions of the generally desirable) in two ways […]. First of all, values are not general aspects of culture, but field specific. Consequently, far from being universal in some group, they are predictably distributed across social positions, since *norms are simply a way of describing regularities in motivation that come from interest-locations*. Second, while the subjective representations of 'what is good to strive for' are generally perceived as ethical imperatives, *this ethicality is secondary* to the field structure — the *subjective experience of values* as injunctions is a *cognitive*

simplification of what is otherwise a complex task of navigating a field." (Martin 2003: 37, emphasis added)

This nuanced formulation outlines a difficulty specific to field analysis. Viewpoints, preferences, tastes, justifications, rationalizations, etc. certainly exist and therefore can be measured. They might be more or less incongruent regarding their *explicit* content, but the closer the focus to their *actual* content, the more congruent the underlying rationale because these mental representations merely reflect — even though via disparate vocabularies — the same underlying principle. As the above examples with reference to authoritarianism and materialism illustrate, once the definition includes those aspects that are hidden from the actor's purview, the resulting definitions (and by implication, measures) of the values in question will reflect the field's organizing principle in a way that would remain hidden if the study kept to a less nuanced definition. That is exactly what is proposed in *Distinction*: although the judgments of taste specific to different locations in the field appear incommensurable from the standpoint of the actors, they are commensurable from the analytical perspective: they can be brought to a common benchmark by revealing the forces structuring the field.

In other words: *the more latent the construct, the less it taps the cognitive simplification (stemming from subjective experience), and the more it reveals what is being cognitively simplified — that is, the gravitational principle*. Regarding the outcomes, it is the logic of the field that matters, not the cognitive simplification.[132]

[132] The opposite perspective, which views values are self-referential ethical imperatives obeying their immanent logic can be traced back to Weber's theory of value spheres (1946). Of the latter, Weber identified six with reference to an "ultimate" value specific to each sphere (in parenthesis): the economy (financial gain), politics (domination), intellectualism (truth), religion (caritas), aestheticism (beauty), erotic love (mutual possession). It should be stressed that the argument built around this typology departs significantly from the perspective developed in connection with elective affinity. Weber's typology of values spheres is *not* relational: he views the six spheres as becoming increasingly autonomous, disconnected domains, each obeying its immanent logic. This tendency is labeled *Eigengesetzlichkeit*: literally self-government by its own laws.

Oakes (2003) argues that Weber's typology and the analysis of the processes built around it are inconsistent and self-contradictory on several counts. First, Weber's view of occidental modernization as driven toward (instrumental) rationality and intellectualization is incompatible with the thesis of increasingly autonomous value spheres. Second, his insistence that the value spheres evolve toward systematization and rationalization (the logic of intellectualism) is incompatible with the logic of immanence: either intellectualism is not a separate value sphere or it "rationalizes all others" (2003: 36), in which case the six spheres are not

I illustrate this with a study by Abrahamson (2014) on the networking habits of college graduates in Britain. Following the variable-centered logic, it is expected that actors invest whatever personal assets in status advancement, including developing rewarding personal networks. Accordingly, those with higher qualifications are assumed to achieve higher rates of upward mobility than do those with lower qualifications. However, this does not mean that everybody engaged in the field will adopt the same attitude with regard to career advancement. Abrahamson's study has found that graduates from a working class background are reluctant to invest in networking. The explanation is the existence of a "code of honor" in light of which such practices are viewed as opportunistic, antithetical to their work ethics which place highest value on genuine achievements and despise what is seen as "nepotism". This is in line with the logic of exclusion that operates in the act of consumption: the behavior of the upper classes is viewed as unnecessarily euphemized, hypocritically sophisticated, in contrast with the authenticity and spontaneity of the popular classes. In rejecting the elite's posture, the popular classes are complicit in their own exclusion — regardless of how they live this objective reality. In doing that, they reinforce the principles of domination inscribed in the logic of the field which favors the elites' self-reproduction.

This rationale is at odds with the substantialist perspective adopted by Inglehart, where different emphases on a value like "achievement motivation" or "work values" are modeled to

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autonomous. Third, the suggestion that action amounts to taking a value position (a stance) is incompatible with the thesis that there are no (axiologically) neutral "vantage" points — and also with the proposition that the principles immanent to each sphere cannot be demonstrated *within* the spheres. Fourth, the typology is inconsistent with the Weberian dichotomy of value versus instrumental rationality (1978). Instrumental rationality requires cost-benefit analysis: it supposes an end, a value in light of which costs and benefits will be weighted. Positing the existence of such ends, the corresponding action is not instrumental but value rational; on the other hand, in the absence of ends, cost-benefit analysis is impossible.

The field analytic reformulation of the issues specific to value research corroborates this criticism. Like Weber's typology, Bourdieu's concept of symbolic profit acknowledges the existence of different rationales for action that reflect value *conflicts*, but it conceives of these as *oppositions*, not as implying *incommensurable* benefits. Although symbolic profits might appear as incommensurable from the standpoint of the actors, they can be brought to a common principle by deconstructing the subjective rationalizations that form a veil around that principle. If the convergence of values — as vocabularies of action, cognitive simplifications — on a same underlying gravitational principle can be demonstrated, then the theoretical dilemmas stemming from the contradictions within Weber's work on values will be decided in favor of his thesis on elective affinity. One then will not escape the irony that it is the latter, empirically relevant chapter of his work on values that much of current scholarship disregards in favor of its idealist interpretation.

"explain" various micro (e.g., support for democracy) or macro outcomes (e.g., national rates of per capita output growth). In the relational perspective, the importance of a value like individual achievement is, in itself meaningless: what matters is not what actors declare in responses to survey questions — or what latent clusters their responses reveal — but how they regulate their own conduct in the field of careers in relation to not only values, but other constituents of the field. Regardless of whether or not the working-class graduates in Abrahamson's study have adopted the values of "achievement motivation", this tells nothing about how they *actually navigate* the field — or their career outcomes. It can be that those members of the popular classes that are in possession of the degrees required for certain career paths will achieve *less* occupational mobility precisely because they have more successfully internalized the official ideology of achievement (that the elites have learnt to treat with "qualifications"), in light of which they will view the various opportunistic tricks required for improving one's career prospects as repellent. (The thesis of *Distinction* suggests that they *will*.) An apparent endorsement of an "official" value like individual achievement may therefore conceal a variety of actuated strategies, simultaneously instrumental and symbolic — and thus may not in itself explain outcomes that depend on the forces organizing the field.[133] What the possession of the degrees and the internalization of the official ideology do not explain — stalled careers — will be explained with reference to the relations between these and other attributes, as well as to the location in the field.

This example highlights two linkages with Weber's typology of action. The first concerns Weber's definition of action: a subclass of conducts in which "the acting individual attaches a subjective meaning to his behavior" (1978: 4). From field theorists' careful distinction between *objective* and *subjective* logics of action, it follows that conduct will contribute to the stability of the field insofar as the subjective meaning attached to behavior stems from a *misapprehension* of the gravitational principle in the case of the dominated. The gravitational principle will pull the dominant and the dominated to adopt different postures with regard to "individual achievement". The dominants will tacitly realize — although not admit openly — that this "value" is much less important to one's career prospects than its ideological consecration suggests, while the dominated will identify with it to such a degree

[133] Abrahamson's findings recall the famous study by Marsh (1963) which found that differences in rates of social mobility between industrial and preindustrial societies stem not from a stronger emphasis on "achievement values" in the case of the former, but from sheer occupational demand: the expanding industrial and service sectors "suck in" an increasing portion of the workforce regardless of their values.

that they will end up blocking their avenues of upward mobility as a result. Since this alignment requires the misapprehension of the gravitational principle on behalf of both the dominated and the dominants, the "valuation" or subjective truth — the cognitive simplification — is less important than the gravitational force, the objective truth.

The second linkage is the proposition that *passive conduct* ranks at the same level of significance as active conduct. If accompanied with subjective meaning, passive conduct is not inaction. In his outline of sociological concepts, Weber (ibid.) had pointed out that three subclasses of passive conduct: omission, acquiescence, and permission constitute a subtype of action in their own right. He even took care to note that *utility* — that is, "economic" serviceability — can be derived from passive, as well as active conduct.[134] Abrahamson's study shows that the adoption of the official values of achievement can result in passive conduct, that is, *refraining from* networking in the case of those members of the working class whose graduate degrees "in principle" open up avenues of upward mobility. From the point of view of the dominant sectors, much of the utility derived from the conduct of the dominated stems from passive conduct (especially omission and acquiescence) because it constitutes a particularly efficient — energy saving — mode of alignment with the gravitational principle. Given the importance of *inertia* in the constitution of fields, field analysis therefore approaches passive and active conduct as equally important "dependent" variables — although their status as dependent variables is construed differently than in the General Linear Model.

3.5. Conclusion

A field analysis of religiosity, authoritarianism and materialism at the level of individual behavior will relate these values to the organizing principles of the *field of class relations* — the broadest field structuring agency and the subfields defined with reference to the possession of specific assets/capitals. Bourdieu's empirical accounts of symbolic power show that in addition to the amount of (economic) capital possessed, the symbolic relation to material interest — ranging from embracement to denial — are keys to this principle.

[134] Defining utility with reference to "services", Weber notes that "[t]he fact that only active conduct, and not mere acquiescence, permission, or omission, are treated as 'services' is a matter of convenience." (Weber 1978: 69)

Likewise, if values as cognitive simplifications are indeed secondary to the "task of navigating the field", then it is legitimate to suppose that religiosity, authoritarianism and materialism — and, moreover, all "normative emphases" — can be related to the same underlying principle. After all, with reference to the epistemological tradition in which field analysis is embedded, it can be argued *these three values all express the distance actors take from the open expression of material interest*. In the case of religiosity, the ultimate value (the sacred, in the Durkheimian sense) is defined in opposition to worldly, that is, material concerns. Authoritarianism and its opposite value, libertarianism, relate to, in the final analysis, approval or rejection of coercion — regardless of "format" or "medium" but always with reference to legitimizing (un)equal access to assets. Materialism, as defined in the above sense, is the most straightforward manifestation of this opposition. Bourdieu's studies suggest that high-brow taste, sophisticated linguistic practices and the most frequent manifestations of economic habitus are oriented toward the denial/concealment of material interest:

> "The struggle between the dominant fractions and the dominated fractions […] tends, in its ideological retranslation […] to be organized by oppositions that are almost superimposable on those which the dominant vision sets up between the dominant class and the dominated classes: on the one hand, freedom, disinterestedness, the 'purity' of sublimated tastes, *salvation in the hereafter*; on the other, necessity, self-interest, base material satisfactions, *salvation in this world*" (Bourdieu 1984: 254, emphasis added).

In other words: salvation in the field theory perspective is the cognitive effort to define a situation and oneself in opposition to material concerns.[135] Accordingly, shifts from a religious to a secular outlook *as measured by our current apparatus* can be shown to be of secondary importance if associated with shifts from authoritarian to libertarian or from materialist to non-materialist positions. (As well as with shifts in any other value dimensions reflecting the same underlying principle.) Denial and rejections of world*ly* concerns do not

[135] The roots of this synthetic approach can be traced back to Durkheim: although he had not formulated a theory of "values", his elaboration on the concept of anomy (1991, 2014) and the collective "tempering" of individual "passions" is compatible with the central argument in his sociology of religion (2001).

disappear with the decline of conventional forms of religion: they are merely manifested via different cognitive simplifications.[136]

Like with any inquiry into any subject, the metathesis of this thesis revolves around the definition of the subject. Beneath the arguments presented in this study lies the deeper and more important question: what are values? Obviously, a work of this scope cannot purport to formulate a definition. Nonetheless, if the field analytical view of values as cognitive simplifications required to navigating a field of force is correct, then we might propose that all values stem from the same underlying principle. Furthermore, if values can be shown to stem from the logic of the aesthetic distinctions structuring the field of class relations, then this will mean that *values are no more than euphemizations of the way actors relate to material interest*. In this perspective, the challenge to researchers will be to identify the appropriate level of analysis where these euphemizations are sufficiently disparate to conceal — from the standpoint of the individual actor — the gravitational principle, but at the same time transsituational enough to form stable orientations. This thesis has merely outlined the approach required to address these issues.

[136] The oppositions captured by Schwartz's two higher-order values: self-transcendence versus self-enhancement, and openness to change versus conservation (Figure 7, p. 35) can also be accommodated within this framework. This is most evident with regard to the opposition between self-transcendence and self-enhancement and their respective lower-level values: universalism and benevolence versus achievement, power and hedonism. In the case of conservation versus openness to change, the spiritual versus materialism opposition is present, albeit in their combinations at both poles. At the openness to change pole, the lower-level value constituting the transition to self-enhancement: hedonism is closer to the materialism "meta-value"; while the other lower-level value: self-direction, to its opposite, self-transcendence. (Stimulation falls in between these two.) At the other end: conservation, conformity and tradition are closer to self-transcendence, security to self-enhancement.

Postscript

The issues with Inglehart's two theses reviewed in this thesis boil down to a methodological apparatus developed in agreement with the substantialist perspective. This study has argued that value research needs a departure from this paradigm. Abandoning the culture-economy dichotomy as empirically irrelevant, the challenge faced in the sociology of values is a reorientation on the actor-field dialectic. Ignoring this relationality has led to misconceptions about the "origins" and "consequences" of values.

The relevant chapters in Weber's and Bourdieu's work suggest that the field analytical approach emphasizing the inextricability of values from objective (material) conditions is firmly anchored in the classical sociological tradition. However, given the influence of the variable-centered paradigm, which came to dominate the social sciences through much of the 20th century, this tradition — including pragmatist, institutional, and heterodox currents — has been of limited influence in value research. This might also explain the low level of sociological engagement with the field.

Overall, the merits of Inglehart's work, including the two theses dissected in this study, overweight their weaknesses. Were it not for his output, cross-cultural research would have probably followed a different trajectory starting with the mid-1970s. His theory of value change and his empirical studies have sparked debates that still contribute to the development of survey technology, quantitative methods, and theorizing. In particular, research into construct invariance has gained momentum after 2000 when the proliferation of data collected by the major global representative surveys and a growing number of related publications had brought these issues to light. If the study of values in the 21st century stands a good chance of overcoming "the balkanized nature of research" (Hitlin and Piliavin 2004), it will be in large part thanks to the apparatus developed by and in engagement with Inglehart.

Nevertheless, a major challenge for the work ahead is related to the proliferation of data. In this respect, it is crucial that practitioners of cross-cultural research (or in any other field) be aware of the limitations of the variable-centered approach. In retrospect, Inglehart's studies from the 1970s on had most of the ingredients of a scientific enterprise organized around what today is called Big Data. Most of the issues with his work discussed in this study

stem from the related focus on entities and their properties. Not if anything was wrong with Big Data: *"the coming crisis of empirical sociology"* (Savage and Burrows 2007) is probably less a matter of accessing the growing body of social data produced and stored out of the reach of academic researchers than of handling what is already available of this bewildering mass. Given this unprecedented abundance, the substantialist temptation is almost insurmountable: there is no shortage of indicators for any research idea, no matter how well formulated — and vice versa: any variable, especially if available cross-culturally and longitudinally, appears to promise unexplored avenues. Inglehart's more recent work has not departed from the variable-centered perspective, and some of his students whose output is gaining comparable influence (e.g., Welzel) have ventured further in this direction.

One should ask the question: were Durkheim to study suicide today, would he have gained a deeper insight into the forces driving individuals to kill themselves by running dozens of multilevel regressions and a plethora of cross-country comparisons using individual-level data on a scale he could not have dreamed of in the 1890s? If he adopted the variable-centered approach, the answer to this question would echo Lieberson's remark, quoted earlier: "regretfully, probably not". Against this, Durkheim had followed, relying on the scarce aggregate statistics of the time, the rules of trade regarding the construction of the object that still constitute the best practice in sociology.

The influence of substantialist reason in value research is here to stay, since, in the words of Wacquant, "(t)his linguistic proclivity to favor substance at the expense of relations is buttressed by the fact that sociologists are always competing with other specialists in the representation of the social world, and especially with politicians and media experts who have a vested interest in such commonsense thinking" (1992: 15). Understandably, these competitive pressures have only been growing with the transition to Big Data. After all, punditry now has access to, and is increasingly able to collect "social" data on its own. As a result, the solicitation of academic researchers by the intellectual doxa of the day is likely to reach new levels. The variable-centered approach has much to offer in terms of attractive, apparently actionable explanations, often backed up by accessible outputs. Relational sociology has no comparable products on offer, and moreover, has to delineate its inquiry against such interferences.

Appendix 1: Endnotes on the method

A1.1. Correspondence analysis

A1.1.1. Standardization in MCA

The technique developed by Bry, Robette and Roueff regresses the scores resulting from MCA on the structural variable (e.g., age, income, region, country) whose effect should be eliminated. A principal component analysis is then performed on the residuals of the dependent variables. Like in MCA, the number of components to extract is equal to the number of dimensions studied. Finally, projecting the categories used in the initial MCA on the cloud of individual scores as supplementary variables, we get a cloud of modalities "cleared" of the structural effects. The usual coefficients to interpret the supplementary variables (e.g., test value, η^2) help interpret the resulting structure. Like with Leung and Bond's method, the resulting scores produce zero means and standard deviations of one. In contrast, since MCA requires categorical variables, within-subject standardization cannot be performed — but is not necessary, given the reduction of the number of modalities into semantically opposed categories.

A1.1.2. Rotation in MCA

Rotation in multiple correspondence analysis has been proposed by a number of authors (Kiers 1991; Adachi 2004; van de Velden and Kiers 2005) but, until recently, has not been implemented in statistical software. The first available software are CAR (Correspondence Analysis with Rotation) for MATLAB, developed by Lorenzo-Seva, van de Velden, and Kiers (2009), and PCAmixdata, a package for R by Chavent, Kuentz, and Saracco (2010, 2011). The rotated solutions presented in this section were obtained with these two packages. The exploratory analyses were performed using CAR, based on the "cross-cultural" contingency table (the Burt table). CAR also calculated the contribution of modalities to the

axes. PCAmixdata provided the coordinates at the individual level for the retained rotated solutions.

A1.1.3. Structuring factor and eta-square *(η^2)*

The categorical variable used as structuring factor (generation, in the analysis presented in Chapter 1) partitions the cloud of individuals into subclouds according to the categories along the dimensions. The variance of the mean points of the clouds is the *between variance* of the partition. The average variance of the subclouds defines the *within variance*. Eta-square, the correlation ratio is obtained by the following formula:

$$\eta^2 = \frac{between\ variance}{between+within\ variance} \quad [2]$$

A1.2. Structural equivalence

A1.2.1. Tucker's phi coefficient

The Tucker's phi congruence coefficient is calculated using the following formula:

$$\phi_{xy} = \frac{\sum x_i y_i}{\sqrt{\sum x_i^2 y_i^2}} \quad [3]$$

where x and y are the loadings after target rotation of one to the other.

A1.2.2. Welzel's secular and emancipative values

While Welzel (2013) did perform a test of dimensional uniformity of his "secular" and "emancipative" values (using the Kayser-Meyer-Olkin measure), its accuracy is far from the procedure presented in this study. First, instead of comparing country surveys, he compared "Western" and "Non-Western" samples, which almost guarantees that much of the country-specific effects will be cancelled out. If scores from only those two blocks were compared, the approach would be justified. But like in Inglehart's major monographs, Welzel's focus is country differences of individual values. Second, country specific variations were eliminated in the individual data before testing for construct uniformity. Applied to our study, a similar procedure would compare the specific country solutions after the within-country standardization needed to obtain the universal dimensions presented in the previous section,

and the result would be converging structures in all countries. Van de Vijver and Poortinga (2002) specifically advise against such standardization: it is precisely those country patterns that tests of structural equivalence should explore.

A1.2.3. Remarks on cross-cultural comparability of constructs

The current construct comparability criteria applied at the individual level prevents important work. Complex individual-level variables like those explored in this study will not pass all of these three tests in the majority of country surveys. The 2008 study by Davidov, Schmidt, and Schwartz (ibid.) is exceptional in that it has established *metric* equivalence for a seven-construct variant of Schwartz's basic values typology in 20 countries — but even these constructs had failed to achieve scalar equivalence. More recent research into construct validity (e.g., Cieciuch and Schwartz 2012; Saris, Knoppen, and Schwartz 2012; Cieciuch et al. 2014) has sought new methods involving less stringent criteria to assess equivalence at the individual level. While these might open up avenues for future work on cross-cultural comparisons of individual values, their implementation would exceed the scope of this study. For this reason, the analysis presented below is confined to the ecological level where construct invariance — while still a limitation — is less prohibitive.

A1.3. Regressions

A1.3.1. Variables used in the models

Per capita GDP

Gross domestic product divided by midyear population at purchasing power parity (PPP). Data are in constant 2005 U.S. dollars.
Source: The World Bank (2014)

Economic growth

Growth rate of per capita real GDP (PPP).
Source: The World Bank (2014)

Investment

Average of the ratio of gross capital formation (formerly gross domestic investment): consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories —, private plus public, to real GDP.
Source: The World Bank (2014)

Income inequality

GINI coefficient of income inequality (%).
Source: World Inequality Database, United Nations University—World Institute for Development Economics Research (2008).

Primary/Secondary education

The number of students enrolled in primary/secondary school grade level relative to the population of that age group.
Source: UNESCO (2014)

R&D expenditure

Expenditures for research and development are current and capital expenditures (both public and private) on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications. R&D covers basic research, applied research, and experimental development.
Source: The World Bank (2014)

Democracy

"Combined Polity Score: The POLITY score is computed by subtracting the AUTOC [autocracy] score from the DEMOC [democracy] score; the resulting unified polity scale ranges from +10 (strongly democratic) to -10 (strongly autocratic)." (Marshalll, Gurr, and Jaggers 2010: 17)
Source: Polity IV Dataset, Center for Systemic Peace (M. G. Marshall, Jaggers, and Gurr 2002)

Political violence

Total summed magnitudes of all societal (civil violence, civil warfare, ethnic violence, ethnic warfare) and interstate (international violence, international warfare) violence. Each instance of violence ranges from 1 (sporadic or expressive political violence) to 10 (extermination and annihilation).
Source: Major Episodes of Political Violence (MEPV) and Conflict Regions (1946-2008) database, Center for Systemic Peace, Monty G. Marshall.

Physical integrity

A measure of government respect for physical integrity rights, ranges from 0 (none) to 8 (full). The score is computed by adding the scores ranging from 0 (none), 1 (partial) and 2 (full) expressing respect for physical integrity with regard to disappearances, killings, imprisonment and torture (Cingranelli and Richards 2010).
Source: The Cingranelli-Richards (CIRI) Human Rights Data Project, 2008.

Authoritarian regime (post 1945)

The nation has lived under authoritarian regime(s) after 1945.
Source: Polity IV Dataset, Center for Systemic Peace

Former colony, 20th century

The country was colonized during the 20th century.
Source: United Nations.

Former colonial power, 20th century

The country had colonies during the 20th century.
Source: United Nations.

Religiosity and authoritarianism

Country scores of the respective values obtained by *correspondence analysis at the ecological level.*
Source: this study, analysis presented in Figure 8 and Table 5 (p. 37).

Autonomy vs. embeddedness, egalitarianism vs. hierarchy, harmony vs. mastery

Country scores of the respective values obtained by multidimensional scaling at the ecological level.
Source: Schwartz Value Survey.

Achievement values

"Four Item Achivement Motivation Index comprised of (Thrift + Determination) - (Obedience + Religious Faith)." (Granato, Inglehart, and Lebalng 1996a: 628)
Source: World Values Survey (1990).

Postmaterialism

Mean score of Inglehart's Postmaterialism Index.
Source: World Values Survey (1990).

A1.3.2. Diagnostic tests

The Durbin-Watson procedure tests the assumption that the residuals from the regression are not serially correlated from one observation to the next. Serial or autocorrelation is evidence of model uncertainty. A value around 2 indicates non-autocorrelation; toward 0, positive autocorrelation; and toward 4, negative autocorrelation. A value between 1.8 and 2.2 is generally accepted as indication of non-autocorrelation. (The acceptable interval depends on the number of dependent variables and the sample size, therefore the lower and upper bounds may vary. The tests related to the models presented in this section use the significance tables by (Savin and White 1977). A † indicates that the residuals are not serially correlated.

The Jarque-Bera coefficient tests for the normal distribution of the residuals. A significant χ^2 value (at two degrees of freedom) indicates normal distribution.) The White procedure is a test of homoskedasticity: residuals are homoskedastic if their standard deviation for different values of the predicted (dependent) variable is close to constant. (Otherwise the accuracy of the prediction would vary depending on the value of the dependent variable, which is an indication of bad fit.) Here, a significant χ^2 (with degrees of freedom depending on the number of independent variables) rejects the null hypothesis of homoskedasticity.

Appendix 2: Additional tables and figures

Table 14 Countries included in the individual-level analysis of universal dimensions

Albania [2002], Algeria [2002], Argentina [1999], Austria [1999], Bangladesh [2002], Belarus [2000], Belgium [1999], Bosnia Federation [2001], Bulgaria [1999], Canada [2000], Chile [2000], Czech Republic [1999], Denmark [1999], Egypt [2000], Estonia [1999], Finland [2000], France [1999], Germany East [1999], Germany West [1999], Great Britain, excl. N. Ireland [1999], Greece [1999], Iceland [1999], India [2001], Indonesia [2001], Ireland [1999], Italy [1999], Jordan [2001], Kyrgyzstan [2003], Latvia [1999], Lithuania [1999], Luxembourg [1999], Macedonia [2001], Malta [1999], Mexico [2000], Moldova [2002], Montenegro [2001], Morocco [2001], Netherlands [1999], Nigeria [2000], Northern Ireland [1999], Peru [2001], Philippines [2001], Poland [1999], Portugal [1999], Puerto Rico [2001], Romania [1999], Russian Federation [1999], Serbia [2001], Serbian Republic of Bosnia [2001], Slovakia [1999], Slovenia [1999], South Africa [2001], Spain [1999], Turkey [2001], Uganda [2001], Ukraine [1999], United States [1999], Viet Nam [2001], Zimbabwe [2001]

Note: Countries from wave 4 of the World Values Survey (1999-2004) included in the analysis presented in Figure 1 and Table 3.

Table 15 Recoding of questions from the World Values Survey for the items used in this study (continued next page)

WVS name	label (for composite items, original variable labels are in italic)		original scale in WVS	recoding rule for MCA (DK=Don't know)	label for modalities in MCA	scales used in PCA/factor analysis (recoding rule if applied)
a038	**THRIFT (saving money and things)**			(1) (0, DK)	**thrift** **no thrift**	0, 1 (DK=0)
a040	**RELIGIOUS FAITH**	Qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?	1: important 0: not mentioned	(1) (0, DK)	**learn faith imp.** **learn faith not imp.**	0, 1 (DK=0)
a042	**UNSELFISHNESS**			(1) (0, DK)	**unselfishness** **no unselfishness**	0, 1 (DK=0)
a125 a129 a130 a132	**REJECT OUTGROUPS**	*People of a different race** *Immigrants/foreign workers** *People who have AIDS* *Homosexuals*	Which (if any) of these people would you not like to have as neighbors? 0 to 4, depending on the number of groups mentioned (only items with an * are used in the reduced MCA model)	(0) (1, 2, 3, 4)	**accept outgroups** **reject outgroups**	0, 1, 2, 3, 4
c011 c016 c018 c019	**GOOD PAY**	*Good pay* *Opportunity to use initiative* *You can achieve something* *Responsible job*	Which ones you personally think are important in a job? 1: important 0: not mentioned	(c011=0) or (c011=1 & c016+c018+ c019>=2) (c011=1 & c016+c018+ c019<=1)	**good pay not most imp.** **good pay most imp.**	3 (c011=0) 2 (c011=1 & c016+c018+ c019>=2) 1 (c011=1 & c016+c018+ c019<=1)
d019	**CHILDLESS WOMAN**	A woman has to have children in order to be fulfilled?	1: not necessary 0: needs children	(0) (1)	**childless woman not OK** **childless woman OK**	0, 1
e003 e004	**SAY & FREEDOM OF SPEECH**	*First choice* *Second choice*	Which one of the things would you say is most important? And the next most important? 1: maintaining order in the nation 2: give people more *say* 3: fighting rising prices 4: protecting *freedom of speech*	(e003=2 or 4) (e003<>2 & 4)	**say & freedom of speech most imp.** **say & freedom of speech not most imp.**	4 ([e003=2 or 4 & e004=2 or 4]) 3 ([e003=2 or 4] & [e004<>2 & 4]) 2 ([e003<>2 & 4] & [e004 =2 or 4]) 1 ([e003<>2 & 4] & [e004<>2 or 4])
e014	**LESS EMPHASIS ON MONEY (and material possessions)**	If it were to happen, do you think it would be a good thing, a bad thing, or don't you mind?	1: good thing 2: don't mind 3: bad thing	(1) (2, 3)	**less emphasis on money** **emphasis on money**	3 (1) 2 (2) 1 (3)
e026 e028 e029	**SUBVERSIVE ACTION**	*Joining in boycotts* *Joining unofficial strikes* *Occupying buildings or factories*	Have you actually done, might do or would never do any of these things: 1: have done 2: might do 3: would never do	(if 3 or 2 for any) (if no 3 or 2 for any: 0, DK)	**subversive action** **no subversive action**	0, 1, 2, 3 [number of actions respondent might do or have done]

WVS name	label (for composite items, original variable labels are in italic)		original scale in WVS	recoding rule for MCA (DK=Don't know)	label for modalities in MCA	scales used in PCA/factor analysis (recoding rule if applied)
e114	**STRONG LEADER**	Having a strong leader who does not have to bother with parliament and elections: would you say it is:	1: very good 2: fairly good 3: bad 4: very bad (way of governing)	(1, 2, DK)	**not opposed to strong leader**	5 (1) 4 (2) 3 (DK) 2 (3) 1 (4)
				(3, 4)	**opposed to strong leader**	
f028	**RELIGIOUS SERVICE**	How often do you attend religious services?	1: 2+/week 2: weekly 3: monthly 4: special holydays 5: other specific holy days 6: once a year 7: less often 8: never, practically never	(1, 2, 3)	**service: 1+/month**	6 (1) 5 (2) 4 (3) 3 (4, 5) 2 (6, 7) 1 (8)
				(4, 5, 6, 7, 8)	**service: rarely/never**	
f034	**RELIGIOUS**	Independently of whether you go to service or not, would you say you are…	1: a religious person 2: not a religious person 3: a convinced atheist 4: other answer	(2, 3, DK)	**not religious**	2 (1) 1 (2, 3, DK)
				(1)	**religious**	
f051	**LIFE AFTER DEATH**	Do you believe in life after death?	1: yes 0: no	(1)	**life after death**	0, 1 (DK=0)
				(0, DK)	**no life after death**	
f064	**COMFORT AND STRENGTH FROM RELIGION**	Do you get comfort and strength from religion?	1: yes 0: no	(1)	**comfort from religion**	0, 1 (DK=0)
				(0, DK)	**no comfort from religion**	
f121	**DIVORCE**	Do you think divorce can be justified?	1 (never justifiable) to 10 (always justifiable)	(1 thru 4)	**divorce not OK**	1 thru 10 (DK=5)
				(5 thru 10, DK)	**not opposed to divorce**	

Table 15 Recoding of questions from the World Values Survey for the items used in this study

Note: Continued from previous page. All variables are recoded into binary modalities for multiple correspondence analysis. "Don't know" (DK) answers are used for a number of questions, as specified in the recoding rules. Variables c011, c016, c018, and c019 (work attitudes) are combined into the item "good pay", based on results from a separate multiple correspondence analysis revealing a latent structure.

Both constructs >= .95		
country & year	**REL**	**AUT**
Argentina 1999	.99	.97
Australia 1995	.99	.98
Austria 1990	.99	.97
Austria 1999	.99	.98
Belarus 2000	.99	.95
Belgium 1981	.99	.95
Belgium 1990	.99	.96
Bosnia Fed. 1998	.99	.99
Bulgaria 1990	.99	.99
Bulgaria 1997	.99	.96
Bulgaria 1999	.99	.98
Canada 1982	.99	.99
Canada 1990	.99	.96
Canada 2000	1.00	.96
Croatia 1999	1.00	.98
Czech 1991	1.00	.98
Czech 1999	1.00	.99
Denmark 1981	.98	.97
Finland 1990	.98	.96
Finland 1996	.99	.97
Finland 2000	.98	.97
France 1990	1.00	.97
France 1999	.99	.97
Germany E. 1990	.98	.99
Germany W. 1981	.98	.96
Germany W. 1990	.99	.98
Germany W. 1997	.99	.98
Germany W. 1999	.99	.99
Iceland 1984	.95	.98
Iceland 1990	.97	.97
Iceland 1999	.96	.98
Ireland 1981	.98	.99
Italy 1981	.99	.99
Italy 1990	.99	.99
Italy 1999	.99	.97
Japan 1981	.97	.96
Japan 1990	.96	.95
Kyrgyzstan 2003	.98	.96
Latvia 1990	.98	.96
Luxembourg 1999	.97	.95
Mexico 1990	.99	.99
Mexico 2000	.98	.99
Netherlands 1981	.99	.98
Netherlands 1990	1.00	.99
Netherlands 1999	1.00	.97
New Zealand 1998	.99	.98
Norway 1982	.99	.95
Norway 1990	.99	.96
Norway 1996	.99	.96
Portugal 1990	.99	.98
Portugal 1999	.99	.96
Puerto Rico 1995	.98	.98
Romania 1999	.98	.95
Russia 1995	.98	.95
Serbia 1996	1.00	.98
Serbia 2001	.99	.97
Slovakia 1999	.98	.96
Slovenia 1995	.99	.96
Slovenia 1999	.99	.98
Spain 1981	.98	.99
Spain 1990	.99	.97
Spain 1995	.98	.96
Spain 1999	.99	.98
Spain 2000	.99	.97
Sweden 1982	.99	.96
Sweden 1990	.99	.98
Switzerland 1996	.99	.96
Taiwan 1994	.96	.95
Turkey 1990	.98	.95
UK 1981	.98	.96
UK 1990	1.00	.99
Ukraine 1996	.99	.98
Ukraine 1999	.99	.96
US 1990	.99	.97
US 1995	1.00	.97
US 1999	.98	.96

1 construct >= .95		
country & year	**REL**	**AUT**
Albania 1998	.99	.33
Albania 2002	.99	.75
Argentina 1991	.99	.89
Argentina 1995	.98	.94
Armenia 1997	.99	.92
Azerbaijan 1997	.98	.93
Belarus 1990	.99	.91
Belarus 1996	.99	.90
Belgium 1999	.99	.65
Bosnia Fed. 2001	.99	.25
Brazil 1991	.98	.93
Brazil 1997	.95	.91
Chile 1990	.99	.94
Chile 1996	.99	.82
Chile 2000	.99	.64
Croatia 1996	.99	.92
Czech 1998	1.00	.93
Denmark 1990	.99	.86
Denmark 1999	.99	.82
Dominican R. 1996	.97	.83
Estonia 1996	.97	.91
Estonia 1999	.98	.86
France 1981	.98	.91
Georgia 1996	.97	.73
Germany E. 1997	.99	.93
Germany E. 1999	.99	.82
Greece 1999	.97	.82
Hungary 1991	.99	.79
Hungary 1998	.99	.89
India 1990	.95	.76
India 2001	.97	.91
Ireland 1990	.98	.93
Ireland 1999	1.00	.91
Latvia 1996	.98	.16
Latvia 1999	.99	.84
Lithuania 1997	1.00	.92
Lithuania 1999	.99	.69
Macedonia 1998	.99	.14
Macedonia 2001	.96	.92
Malta 1983	.96	.67
Malta 1991	.96	.78
Malta 1999	.95	.79
Mexico 1996	.99	.51
Moldova 1996	.95	.44
Moldova 2002	.98	.54
Montenegro 1996	.99	.70
Montenegro 2001	.99	.94
Nigeria 1990	.98	.93
N. Ireland 1981	.96	.51
N. Ireland 1990	.99	.91
N. Ireland 1999	.99	.92
Peru 1996	.97	.90
Peru 2001	.97	.94
Philippines 2001	.95	.80
Poland 1990	.99	.88
Poland 1999	.99	.92
Puerto Rico 2001	.96	.93
Romania 1998	.99	.79
Russia 1990	.99	.88
Russia 1999	.99	.90
Serbian R. Bosnia 1998	.98	.57
Serbian R. Bosnia 2001	.99	.86
Slovakia 1991	.99	.93
Slovakia 1998	.99	.91
Slovenia 1992	1.00	.79
South Africa 1996	.99	.79
South Africa 2001	1.00	.63
Sweden 1996	.99	.93
Turkey 1996	.98	.91
Turkey 2001	.98	.90
Uganda 2001	.98	.73
UK 1999	.99	.84
Uruguay 1996	.99	.92
Vietnam 2001	.99	.55
Zimbabwe 2001	.98	.87

Both constructs < .95		
country & year	**REL**	**AUT**
Algeria 2002	.91	.29
Argentina 1984	.92	.90
Bangladesh 1996	.82	.88
Bangladesh 2002	.80	.65
India 1995	.93	.47
Indonesia 2001	.83	.94
Jordan 2001	.48	.75
Morocco 2001	.36	.53
Nigeria 2000	.93	.41
Philippines 1996	.88	.78
Venezuela 1996	.93	.88

Table 16 Congruence of the religiosity and authoritarianism constructs at the individual level

Note: Figures are Tucker's Phi factor congruence coefficients. Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries for the pooled-between solution). Standardization methods are not used. Orthogonal rotation of axes. REL refers to religiosity, AUT to authoritarianism. A good agreement is indicated by an index of .95 or higher.

country & year	REL	AUT	No.of fits
Argentina 1995	**0,98**	**0,92**	**2**
Argentina 1999	**0,99**	**0,98**	**2**
Armenia 1997	**0,99**	**0,92**	**2**
Australia 1995	**0,98**	**0,98**	**2**
Austria 1990	**0,99**	**0,98**	**2**
Austria 1999	**0,99**	**0,98**	**2**
Azerbaijan 1997	**0,98**	**0,92**	**2**
Belarus 2000	**1,00**	**0,94**	**2**
Belgium 1981	**0,99**	**0,92**	**2**
Belgium 1990	**1,00**	**0,94**	**2**
BosniaFed 1998	**0,99**	**0,99**	**2**
Brazil 1991	**0,98**	**0,91**	**2**
Brazil 1997	**0,95**	**0,90**	**2**
Bulgaria 1990	**0,99**	**0,99**	**2**
Bulgaria 1997	**0,99**	**0,93**	**2**
Bulgaria 1999	**0,99**	**0,94**	**2**
Canada 1982	**0,99**	**0,98**	**2**
Canada 1990	**0,99**	**0,96**	**2**
Canada 2000	**0,99**	**0,94**	**2**
Chile 1990	**0,99**	**0,94**	**2**
Croatia 1996	**0,99**	**0,92**	**2**
Croatia 1999	**0,99**	**0,91**	**2**
Czech 1991	**1,00**	**0,98**	**2**
Czech 1998	**1,00**	**0,90**	**2**
Czech 1999	**1,00**	**0,99**	**2**
Estonia 1996	**0,97**	**0,91**	**2**
Finland 1990	**0,98**	**0,95**	**2**
Finland 1996	**0,99**	**0,98**	**2**
Finland 2000	**0,98**	**0,95**	**2**
France 1981	**0,98**	**0,90**	**2**
France 1990	**1,00**	**0,97**	**2**
France 1999	**0,99**	**0,98**	**2**
GermanyE 1990	**0,99**	**0,99**	**2**
GermanyE 1997	**0,99**	**0,90**	**2**
GermanyW 1981	**0,98**	**0,95**	**2**
GermanyW 1990	**0,99**	**0,98**	**2**
GermanyW 1997	**0,99**	**0,99**	**2**
GermanyW 1999	**0,99**	**0,95**	**2**
Iceland 1990	**0,97**	**0,97**	**2**
Iceland 1999	**0,95**	**0,98**	**2**
India 2001	**0,97**	**0,93**	**2**
Ireland 1981	**0,97**	**0,98**	**2**
Ireland 1990	**0,98**	**0,94**	**2**
Ireland 1999	**1,00**	**0,92**	**2**
Italy 1981	**0,98**	**0,92**	**2**
Italy 1990	**0,99**	**0,98**	**2**
Italy 1999	**0,99**	**0,98**	**2**
Japan 1990	**0,96**	**0,95**	**2**
Kyrgyzstan 2003	**0,98**	**0,96**	**2**
Latvia 1990	**0,95**	**0,97**	**2**
Lithuania 1997	**1,00**	**0,94**	**2**
Lithuania 1999	**1,00**	**0,94**	**2**
Luxembourg 1999	**0,98**	**0,91**	**2**
Macedonia 2001	**0,96**	**0,93**	**2**
Mexico 1990	**0,99**	**0,99**	**2**
Mexico 2000	**0,98**	**0,98**	**2**
Montenegro 2001	**0,99**	**0,93**	**2**
Netherlands 1981	**0,99**	**0,99**	**2**
Netherlands 1990	**1,00**	**0,99**	**2**
Netherlands 1999	**1,00**	**0,98**	**2**
NewZealand 1998	**0,99**	**0,97**	**2**
Nigeria 1990	**0,97**	**0,92**	**2**
NIreland 1990	**0,99**	**0,92**	**2**
NIreland 1999	**0,99**	**0,90**	**2**
Norway 1982	**0,99**	**0,95**	**2**
Norway 1990	**0,99**	**0,97**	**2**
Norway 1996	**0,99**	**0,97**	**2**
Peru 1996	**0,97**	**0,91**	**2**
Peru 2001	**0,97**	**0,95**	**2**
Portugal 1990	**0,99**	**0,97**	**2**
PuertoRico 1995	**0,98**	**0,99**	**2**
PuertoRico 2001	**0,97**	**0,94**	**2**
Romania 1999	**0,98**	**0,94**	**2**
Russia 1995	**0,98**	**0,95**	**2**
Russia 1999	**0,99**	**0,9**	**2**
Serbia 1996	**0,99**	**0,99**	**2**
Serbia 2001	**0,99**	**0,97**	**2**
Slovakia 1991	**0,99**	**0,94**	**2**
Slovakia 1998	**0,99**	**0,91**	**2**
Slovakia 1999	**0,99**	**0,95**	**2**
Slovenia 1995	**0,99**	**0,97**	**2**
Slovenia 1999	**0,99**	**0,99**	**2**
Spain 1981	**0,97**	**0,97**	**2**
Spain 1990	**0,99**	**0,98**	**2**
Spain 1995	**0,97**	**0,9**	**2**
Spain 1999	**0,99**	**0,98**	**2**
Spain 2000	**0,99**	**0,98**	**2**
Sweden 1982	**1,00**	**0,97**	**2**
Sweden 1990	**0,99**	**0,99**	**2**
Sweden 1996	**0,99**	**0,94**	**2**
Switzerland 1996	**0,99**	**0,96**	**2**
Taiwan 1994	**0,96**	**0,95**	**2**
Turkey 1990	**0,98**	**0,97**	**2**
UK 1981	**0,98**	**0,93**	**2**
UK 1990	**1,00**	**0,96**	**2**
Ukraine 1996	**0,99**	**0,98**	**2**
Ukraine 1999	**0,99**	**0,95**	**2**
Uruguay 1996	**0,99**	**0,93**	**2**
US 1990	**0,99**	**0,98**	**2**
US 1995	**0,99**	**0,97**	**2**
US 1999	**0,99**	**0,98**	**2**
Albania 1998	0,99	0,34	1
Albania 2002	0,99	0,71	1
Argentina 1991	0,98	0,81	1
Belarus 1990	0,99	0,86	1
Belarus 1996	0,99	0,87	1
Belgium 1999	0,99	0,73	1
BosniaFed 2001	0,99	0,28	1
Chile 1996	0,99	0,78	1
Chile 2000	0,99	0,63	1
Denmark 1981	0,98	0,88	1
Denmark 1990	0,99	0,86	1
Denmark 1999	0,99	0,83	1
DominicanR 1996	0,97	0,77	1
Estonia 1999	0,98	0,77	1
Georgia 1996	0,98	0,69	1
GermanyE 1999	0,99	0,8	1
Greece 1999	0,97	0,81	1
Hungary 1991	0,99	0,82	1
Hungary 1998	0,99	0,89	1
Iceland 1984	0,91	0,9	1
India 1990	0,96	0,78	1
Indonesia 2001	0,83	0,94	1
Latvia 1996	0,98	0,16	1
Latvia 1999	0,99	0,84	1
Macedonia 1998	0,99	0,16	1
Malta 1983	0,96	0,67	1
Malta 1991	0,96	0,78	1
Malta 1999	0,97	0,84	1
Mexico 1996	0,99	0,48	1
Moldova 2002	0,98	0,49	1
Montenegro 1996	0,98	0,64	1
Morocco 2001	0,95	0,86	1
NIreland 1981	0,96	0,46	1
Philippines 2001	0,95	0,72	1
Poland 1990	0,99	0,86	1
Poland 1999	0,99	0,85	1
Romania 1998	0,99	0,78	1
Russia 1990	0,99	0,87	1
SerbianRepBosnia 1998	0,97	0,62	1
SerbianRepBosnia 2001	0,99	0,87	1
Slovenia 1992	**1,00**	0,76	1
SouthAfrica 1996	0,99	0,65	1
SouthAfrica 2001	0,99	0,47	1
Turkey 2001	0,96	0,89	1
Uganda 2001	0,97	0,64	1
UK 1999	0,99	0,86	1
VietNam 2001	0,99	0,47	1
Zimbabwe 2001	0,98	0,45	1
Algeria 2002	0,92	0,2	0
Argentina 1984	0,89	0,74	0
Bangladesh 1996	0,81	0,88	0
Bangladesh 2002	0,82	0,64	0
India 1995	0,93	0,53	0
Japan 1981	0,94	0,77	0
Jordan 2001	0,61	0,32	0
Moldova 1996	0,94	0,44	0
Nigeria 2000	0,93	0,39	0
Philippines 1996	0,85	0,68	0
Portugal 1999	0,94	0,52	0
Turkey 1996	0,93	0,89	0
Venezuela 1996	0,94	0,89	0

Table 17 Congruence of the religiosity and authoritarianism constructs <u>at the ecological level</u>

Note: Figures are Tucker's Phi factor congruence coefficients. Data are from the World Values Survey, waves 1 to 4 (1981-2004, 162 surveys in 74 countries for the pooled-between solution). Standardization methods are not used. Orthogonal rotation of axes. REL refers to religiosity, AUT to authoritarianism. A good agreement is indicated by an index of .95 or higher for REL, and 0.9 or higher for AUT.

Table 18 Congruence of Inglehart's secular-traditional and self-expression-survival constructs <u>at the ecological level</u>

Note: Figures are Tucker's Phi factor congruence coefficients. All available country surveys are listed for the first three waves of the World Values Survey (102 surveys in 64 countries from 1981 through 1998). SRT refers to "Secular/Rational vs. Traditional", SES to "Self-Expression vs. Survival" values. Surveys where both constructs are structurally equivalent (Tucker's Phi >= 0.9) are marked in bold.

country & year	SRT	SES	No.of fits
Iceland 1984	**0.99**	**0.99**	**2**
US 1995	**0.99**	**0.98**	**2**
US 1990	**0.99**	**0.97**	**2**
Croatia 1996	**0.98**	**0.97**	**2**
Denmark 1981	**0.98**	**0.97**	**2**
Sweden 1982	**0.98**	**0.97**	**2**
Ireland 1990	**0.99**	**0.96**	**2**
Italy 1981	**0.99**	**0.96**	**2**
Norway 1982	**0.99**	**0.96**	**2**
Spain 1990	**0.99**	**0.96**	**2**
GermanyW 1981	**0.98**	**0.96**	**2**
Argentina 1995	**0.99**	**0.94**	**2**
Canada 1982	**0.99**	**0.94**	**2**
Finland 1996	**0.99**	**0.94**	**2**
Belarus 1996	**0.97**	**0.95**	**2**
Finland 1990	**0.98**	**0.94**	**2**
France 1981	**0.98**	**0.94**	**2**
Ireland 1981	**0.98**	**0.94**	**2**
Slovenia 1995	**0.98**	**0.94**	**2**
Poland 1990	**0.96**	**0.95**	**2**
Sweden 1990	**0.98**	**0.93**	**2**
Portugal 1990	**0.99**	**0.92**	**2**
Switzerland 1989	**0.97**	**0.93**	**2**
GermanyW 1990	**0.98**	**0.92**	**2**
Czech 1991	**0.99**	**0.91**	**2**
Italy 1990	**0.99**	**0.91**	**2**
Brazil 1991	**0.98**	**0.91**	**2**
Japan 1981	**0.99**	**0.90**	**2**
Czech 1998	**0.97**	**0.91**	**2**
Spain 1981	**0.97**	**0.91**	**2**
France 1990	**0.98**	**0.90**	**2**
Slovakia 1991	0.98	0.89	1
Spain 1995	0.99	0.88	1
Brazil 1997	0.98	0.88	1
PuertoRico 1995	0.96	0.89	1
Argentina 1984	0.98	0.87	1
Australia 1995	0.99	0.86	1
SouthAfrica 1990	0.99	0.86	1
India 1990	0.96	0.88	1
DominicanR 1996	0.98	0.86	1
Austria 1990	0.99	0.85	1
Hungary 1998	0.95	0.88	1
NewZealand 1998	0.96	0.87	1
Slovakia 1998	0.96	0.87	1
Taiwan 1994	0.98	0.85	1
GermanyE 1997	0.99	0.84	1
Belgium 1981	1.00	0.83	1
Belgium 1990	1.00	0.83	1
Peru 1996	0.96	0.86	1
Argentina 1991	0.98	0.84	1
UK 1981	0.99	0.83	1

country & year	SRT	SES	No.of fits
Uruguay 1996	0.99	0.83	1
Malta 1991	0.94	0.87	1
Lithuania 1997	0.96	0.85	1
SouthAfrica 1996	0.97	0.84	1
Turkey 1990	0.97	0.84	1
Bulgaria 1997	0.91	0.89	1
Ukraine 1996	0.92	0.86	1
Russia 1995	0.92	0.85	1
Colombia 1998	0.95	0.82	1
Serbia 1996	0.96	0.81	1
Norway 1996	0.98	0.78	1
NIreland 1990	0.98	0.78	1
Hungary 1991	0.95	0.79	1
Japan 1990	0.98	0.76	1
GermanyW 1997	0.99	0.74	1
Latvia 1996	0.90	0.81	1
Slovenia 1992	0.97	0.69	1
Venezuela 1996	0.96	0.67	1
Norway 1990	0.97	0.64	1
Armenia 1997	0.96	0.64	1
Mexico 1996	0.96	0.64	1
Netherlands 1981	0.98	0.62	1
Chile 1990	0.99	0.61	1
Netherlands 1990	0.96	0.62	1
Romania 1998	0.98	0.60	1
Japan 1995	0.93	0.60	1
Switzerland 1996	0.99	0.55	1
GermanyE 1990	0.99	0.53	1
Belarus 1990	0.93	0.56	1
Nigeria 1995	0.90	0.56	1
UK 1990	1.00	0.50	1
Mexico 1990	0.97	0.48	1
Moldova 1996	0.92	0.47	1
Canada 1990	0.98	0.43	1
Montenegro 1996	0.95	0.42	1
Bulgaria 1990	0.92	0.42	1
NIreland 1981	0.99	0.33	1
BosniaFed 1998	0.93	0.34	1
Russia 1990	0.90	0.32	1
Iceland 1990	0.96	0.28	1
Chile 1996	0.98	0.26	1
Nigeria 1990	0.94	0.23	1
Sweden 1996	0.94	0.21	1
Georgia 1996	0.95	0.13	1
Macedonia 1998	0.92	0.05	1
India 1995	0.94	0.02	1
Estonia 1996	0.87	0.88	0
Philippines 1996	0.88	0.78	0
Albania 1998	0.71	0.37	0
Azerbaijan 1997	0.88	0.25	0
SerbianRepBosnia 1998	0.85	0.24	0

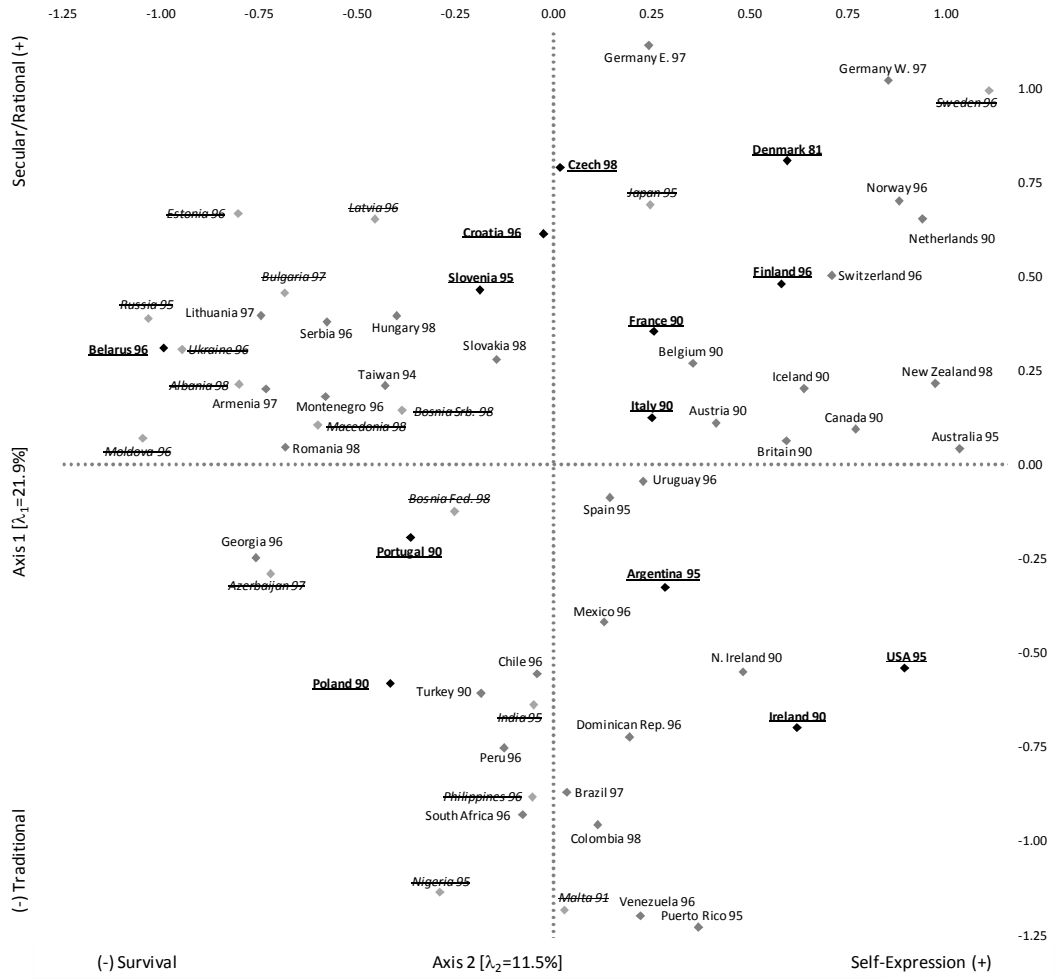

Figure 14 Global map of 64 societies based on an ecological reanalysis of Inglehart and Baker's 10 variables

Note: Same database as used in Inglehart and Baker, 2000 and for Figure 10. The scores shown are from the latest available survey for each country from the period covered by waves 2 and 3 (1990-1991 and 1995-1998) of the World Values Survey. Principal component analysis with orthogonal rotation of axes; standardization methods are not used. Not included in the map are countries where any of the 10 variables are missing. (1) **Bold, underscored fonts** represent countries whose scores satisfy the criteria of construct equivalence (similar loadings) for both the secular-rational and the self-expression-survival value constructs. (2) small fonts indicate countries where construct equivalence is achieved by either constructs. (3) ~~*Crossed out italics*~~ indicate countries for which neither of these scores is construct equivalent.

Pacific Canada

British Columbia

Prairies

Alberta
Saskatchewan
Manitoba

Ontario

Ontario

Quebec

Quebec

Atlantic Canada

New Brunswick
Prince Edward Island
Nova Scotia
Newfoundland and Labrador

Northern Canada

Yukon
Northwest Territories
Nunavut

Table 19 Regional divisions of Canada

Note: Table 19 and Table 20 show the regional divisions used in the analysis presented in Figure 11.

Northeast

Division 1: New England

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Division 2: Mid-Atlantic

New Jersey
New York
Pennsylvania

Midwest

Division 3: East North Central

Illinois
Indiana
Michigan
Ohio
Wisconsin

Division 4: West North Central

Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

South

Division 5: South Atlantic

Delaware
Florida
Georgia
Maryland
North Carolina
South Carolina
Virginia
Washington D.C.
West Virginia

Division 6: East South Central

Alabama
Kentucky
Mississippi
Tennessee

Division 7: West South Central

Arkansas
Louisiana
Oklahoma
Texas

West

Division 8: Mountain

Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

Division 9: Pacific

Alaska
California
Hawaii
Oregon
Washington

Table 20 Regional divisions of the United States

Table 21 Countries included in regression models of growth and per capita GDP

	Growth		Per capita GDP	
	Partial	Expanded	Partial	Expanded
Argentina	x	x		
Armenia	x		x	
Australia	x	x	x	x
Austria	x	x	x	x
Azerbaijan	x		x	
Belarus	x		x	
Belgium	x	x	x	x
Bolivia		x		x
Bosnia & Herzegovina				
Brazil	x	x	x	x
Bulgaria	x	x	x	x
Cameroon		x		
Canada	x	x	x	x
Chile	x	x	x	x
China		x		x
Colombia		x		x
Costa Rica		x		x
Croatia	x	x	x	x
Cyprus				x
Czech	x	x	x	x
Denmark		x		x
Egypt		x		x
Estonia	x	x	x	x
Ethiopia		x		x
Fiji				
Finland	x	x	x	x
France	x	x	x	x
Georgia		x		x
Germany	x	x	x	x
Ghana		x		x
Greece		x		x
Hong Kong				
Hungary		x		x
Iceland				
India	x	x	x	x
Indonesia		x		x
Iran				x
Ireland	x	x	x	x
Israel		x		x
Italy	x	x	x	x
Japan	x	x	x	x
Jordan		x		x
Korea (Rep.)		x		x
Kyrgyzstan	x		x	
Latvia	x	x	x	x
Lithuania	x		x	
Luxembourg				
Macedonia	x	x	x	x
Malaysia		x		x
Mexico	x	x	x	x
Montenegro			x	
Namibia				x
Nepal		x		x
Netherlands	x	x	x	x
New Zealand	x	x	x	x
Nigeria	x	x	x	x
Norway	x	x	x	x
Oman				
Pakistan		x		x
Peru	x	x	x	x
Philippines		x		x
Poland		x		x
Portugal	x	x	x	x
Puerto Rico				
Romania	x	x	x	x
Russia	x	x	x	x
Senegal		x		x
Serbia	x	x	x	x
Singapore				
Slovakia	x	x	x	x
Slovenia	x	x	x	x
South Africa		x		x
Spain	x	x	x	x
Sweden	x	x	x	x
Switzerland	x	x	x	x
Taiwan				
Thailand		x		x
Turkey	x	x	x	x
Uganda		x		x
UK (incl. N. Ireland)	x	x	x	x
Ukraine	x	x	x	x
Uruguay	x		x	
USA	x	x	x	x
Venezuela		x		
Yemen		x		
Zimbabwe				

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Abstract

Current research into values is dominated by a variable-centered paradigm that defines its inquiry as a study of substances and their impacts on each other. This is a more or less inevitable outcome of the field's progression toward Big Data, where emergent qualities are disregarded in favor of a focus on the abundance of indicators and their "interactions". To illustrate the issues with this paradigm, I deconstruct Ronald Inglehart's thesis of postmaterialist value shift and his model of culturally induced economic growth. This critique takes the field analytical perspective, a relational approach to the study of social facts that originates in the pragmatist philosophical tradition and related currents in classical sociology.

The engagement with Inglehart's thesis on value change includes a cross-cultural reanalysis of data collected within the scope of the World Values Survey. The study applies the multivariate technique of choice in field analysis, multiple correspondence analysis, which yields more consistent latent constructs than the linear techniques used as benchmarks — and in Inglehart's studies. Keeping to these dimensions, national values and trajectories of value change challenge Inglehart's account on several counts.

The review of Inglehart's proposed update to the endogenous model of economic growth points out inconsistencies with the historical record of public investment in technological innovation and state intervention in general, especially with regard to the economically most developed countries. Incorporating a model using the constructs presented in the first part, this study questions Inglehart's proposition that values have an independent effect on growth.

The implications of the two empirical chapters are discussed with reference to Weber's concept of elective affinity and Bourdieu's studies of symbolic power. The empirical irrelevance of the culture-economy dichotomy (or symbolic versus material forms of agency) is discussed in connection with the field analytical reformulation of the challenges ahead in the sociology of values.

Absztrakt

A társadalmi értékek kutatását jelenleg a változó-centrikus paradigma uralja, amely vizsgálatának középpontjában szubsztanciák (entitások) és azok egymásra gyakorolt hatásai (pontosabb volna úgy fogalmazni: "ütközései") állnak. Az emergens minőségek ezzel a szemlélettel összefüggő hanyagolása többé-kevésbé elkerülhetetlen fejlemény a Big Datának köszönhetően egyre nagyobb mennyiségben rendelkezésre álló mutatókra és kapcsolataikra fókuszáló kutatási programok térnyerésével. A dolgozat ennek a paradigmának a hiányosságait mutatja be Ronald Inglehart posztmaterialista értékváltás-tézisének, valamint kulturalista gazdasági növekedés-modelljének kritikáján keresztül. Munkámban a pragmatikus filozófiai hagyományra, illetve az azzal rokon klasszikus szociológiai áramlatokra visszavezethető mezőelemzés szemléletmódját alkalmazom.

Inglehart értékváltás-tézisének vizsgálatához a World Values Survey-ből használok adatokat. A mezőelemzésben gyakran alkalmazott módszerrel, többszörös korreszpondencia-elemzéssel a viszonyításként használt lineáris módszerek — köztük Inglehart vizsgálatainak — eredményeivel összevetve koherensebb értékdimenziók tárhatók fel. Az egyes országok pozíciói, illetve azok változásai ezeknek a dimenzióknak a terében számos ponton megkérdőjelezik Inglehart diagnózisait.

Az Inglehart által egy, a kultúrát operacionalizáló változóval bővített endogén növekedés-modell figyelmen kívül hagyja a gazdasági növekedésben alapvető, különösen a technológiai innováción keresztül érvényesülő állami beavatkozást. Ezeknek a folyamatoknak a jelentősége a nemzetgazdaságok méretével egyenesen arányos. Inglehart modellje azt sugallja, hogy a gazdasági növekedés egyik gyökere kulturális értékekben keresendő. Az első részben bemutatott komplex értékváltozókat használó modellel kiegészített kritika megkérdőjelezi ezt az állítást.

A két empirikus fejezet tanulságait Weber elektív affinitás-fogalma és Bourdieu szimbolikus hatalommal foglalkozó munkáinak segítségével értelmezem. A "kultúra" és "gazdaság" (továbbá a cselekvés anyagi/instrumentális, illetve szimbolikus vonatkozásai) elválasztásának empirikus értelmetlenségét az értékszociológia előtt álló kihívások mezőelméleti újraértelmezésén keresztül tárgyalom.